

SEQUENCE LISTING

<110> Vernet et al.

<120> Novel Polypeptides and Nucleic Acids Encoding Same

<130> 15966-672 Utility

<140> 09/783,436

<141> 2001-02-14

<150> 60/182,637

<151> 2000-02-15

<150> 60/237,862

<151> 2000-10-04

<150> 60/240,316

<151> 2000-10-13

<150> 09/783,436

<151> 2001-02-14

<160> 75

<170> PatentIn Ver. 2.1

<210> 1

<211> 579

<212> DNA

<213> Homo sapiens

<400> 1

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gccatgggat	aaggcctctg	cacagctcta	gaagcttcaa	tcccatttcc	accatacat	240
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tgcaagatgt	ctaattgccag	tcattcacag	ggcagctcag	accctggcct	gcggtgcata	360
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cccgtgaccc	atgctgtgga	cttcatgttc	taggaggtag	agggagacag	acaagaatca	480
aatgactgta	ctaggccggg	cgcactggct	cacgcctgta	atcccagcac	tttggggagg	540
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<210> 2

<211> 94

<212> PRT

<213> Homo sapiens

<400> 2

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Thr Ala Lys Ser Glu Asp Ser Gly Trp Cys Gly Pro Val Cys Lys Glu
 35 40 45

Ser Ser Gly His Gly Ile Arg Pro Leu His Ser Ser Arg Ser Phe Asn
 50 55 60

Pro Ile Ser Thr His Thr Ser Leu Cys Ala Leu Thr Pro Pro Gln Pro
 65 70 75 80

Phe Trp Asn Lys Thr Ile Thr Ala Gln Gly Leu Gln Asp Val
 85 90

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 <212> DNA
 <213> Homo sapiens

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 ctataaaaca agaaaacctc tacgtacaga tcttttaaaa ttaaagcagg catctttgct 180
 gatccacctc tataagttgc aggttgagta tctcttatct gaaatgctag agaccagaag 240
 tgtttcaggt ttcagatatt tagattttgg aatatttgca tatacacgag atatccaggg 300
 gaagagaccc aagtctaaac atgaaattca tttatgtttc atatacacct catatatata 360
 tagcctgaag gtaattttat acagtattta taatttgtcc aaggaacaaa gttttgactg 420
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 ccgggcagcc gctcgagccc tatagtgagt aa 692

<210> 4
 <211> 115
 <212> PRT
 <213> Homo sapiens

<400> 4
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 1 5 10 15

Ile Phe Ala Tyr Thr Arg Asp Ile Gln Gly Lys Arg Pro Lys Ser Lys
 20 25 30

His Glu Ile His Leu Cys Phe Ile Tyr Thr Ser Tyr Ile Tyr Ser Leu
 35 40 45

Lys Val Ile Leu Tyr Ser Ile Tyr Asn Leu Ser Lys Glu Gln Ser Phe
 50 55 60

Asp Cys Val Leu Thr Met Thr Arg His Val Lys Ser Tyr Val Glu Phe
 65 70 75 80

Ser Thr Cys Gly Ile Thr Gln Ala Leu Lys Lys Leu Gln Ile Trp Glu
 85 90 95

His Ile Gly Phe Arg Ile Phe Arg Leu Gly Met Leu Asn Pro Tyr Ser
 100 105 110

Val Tyr Gln
 115

<210> 5
 <211> 2351
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (408)
 <223> Where n is an A, T, G, or C

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 cgccactgca ctccagcctg ggcgacagag cgagactccg tctcaaaaaa aaaaaaaaag 180
 aacatcctga gccgggctg gaaaagctct ttgcagatgg cgcttccatc tctgcgcccc 240
 tcgggggtggg ggctgtccca tgttgctcct gctggggcct ctcaggcttc ctctttgccc 300
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 ctatgggcta atgaagctgg tgcctgccaa tgccttgccg gctgagctgg cccgcgtcat 540
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 gtccatggac cggtgcaga tgttggaagc cctgtgcagg cactggcctg gccccatgag 1320
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 cctcagtgac attgacttcc tgccctgcct tctctctctac gactacctca gggcctccat 1560
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 cctgcgttac cgcttcagct tccccattc caaggtggag ctgttggcct tgctggatgc 1680
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tcataattaa a

2351

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<211> 616

<212> PRT

<213> Homo sapiens

<400> 6

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Arg Lys Asn Pro Leu His Leu His Leu Val Thr Asp Ala Val Ala Arg
20 25 30

Asn Ile Leu Glu Thr Leu Phe His Thr Trp Met Val Pro Ala Ile Asp
35 40 45

Pro Val Ser Phe Tyr His Ala Asp Gln Leu Lys Pro Gln Val Ser Trp
50 55 60

Ile Pro Asn Lys His Tyr Ser Gly Leu Tyr Gly Leu Met Lys Leu Val
65 70 75 80

Leu Pro Asn Ala Leu Pro Ala Glu Leu Ala Arg Val Ile Val Leu Asp
85 90 95

Thr Asp Val Thr Phe Ala Ser Asp Ile Ser Glu Leu Trp Ala Leu Phe
100 105 110

Ala His Phe Ser Asp Thr Gln Ala Ile Gly Leu Val Glu Asn Gln Ser
115 120 125

Asp Trp Tyr Leu Gly Asn Leu Trp Lys Asn His Arg Pro Trp Pro Ala
130 135 140

Leu Gly Arg Gly Phe Asn Thr Gly Val Ile Leu Leu Arg Leu Asp Arg
145 150 155 160

Leu Arg Gln Ala Gly Trp Glu Gln Met Trp Arg Leu Thr Ala Arg Arg
165 170 175

Glu Leu Leu Ser Leu Pro Ala Thr Ser Leu Ala Asp Gln Asp Ile Phe
180 185 190

Asn Ala Val Ile Lys Glu His Pro Gly Leu Val Gln Arg Leu Pro Cys
195 200 205

Val Trp Asn Val Gln Leu Ser Asp His Thr Leu Ala Glu Arg Cys Tyr
210 215 220

Ser Glu Ala Ser Asp Leu Lys Val Ile His Trp Asn Ser Pro Lys Lys
225 230 235 240

Leu Arg Val Lys Asn Lys His Val Glu Phe Phe Arg Asn Phe Tyr Leu
245 250 255

Thr Phe Leu Glu Tyr Asp Gly Asn Leu Leu Arg Arg Glu Leu Phe Val
 260 265 270
 Cys Pro Ser Gln Pro Pro Pro Gly Ala Glu Gln Leu Gln Gln Ala Leu
 275 280 285
 Ala Gln Leu Asp Glu Glu Asp Pro Cys Phe Glu Phe Arg Gln Gln Gln
 290 295 300
 Leu Thr Val His Arg Val His Val Thr Phe Leu Pro His Glu Pro Pro
 305 310 315 320
 Pro Pro Arg Pro His Asp Val Thr Leu Val Ala Gln Leu Ser Met Asp
 325 330 335
 Arg Leu Gln Met Leu Glu Ala Leu Cys Arg His Trp Pro Gly Pro Met
 340 345 350
 Ser Leu Ala Leu Tyr Leu Thr Asp Ala Glu Ala Gln Gln Phe Leu His
 355 360 365
 Phe Val Glu Ala Ser Pro Val Leu Ala Ala Arg Gln Asp Val Ala Tyr
 370 375 380
 His Val Val Tyr Arg Glu Gly Pro Leu Tyr Pro Val Asn Gln Leu Arg
 385 390 395 400
 Asn Val Ala Leu Ala Gln Ala Leu Thr Pro Tyr Val Phe Leu Ser Asp
 405 410 415
 Ile Asp Phe Leu Pro Ala Tyr Ser Leu Tyr Asp Tyr Leu Arg Ala Ser
 420 425 430
 Ile Glu Gln Leu Gly Leu Gly Ser Arg Arg Lys Ala Ala Leu Val Val
 435 440 445
 Pro Ala Phe Glu Thr Leu Arg Tyr Arg Phe Ser Phe Pro His Ser Lys
 450 455 460
 Val Glu Leu Leu Ala Leu Leu Asp Ala Gly Thr Leu Tyr Thr Phe Arg
 465 470 475 480
 Tyr His Glu Trp Pro Arg Gly His Ala Pro Thr Asp Tyr Ala Arg Trp
 485 490 495
 Arg Glu Ala Gln Ala Pro Tyr Arg Val Gln Trp Ala Ala Asn Tyr Glu
 500 505 510
 Pro Tyr Val Val Val Pro Arg Asp Cys Pro Arg Tyr Asp Pro Arg Phe
 515 520 525
 Val Gly Phe Gly Trp Asn Lys Val Ala His Ile Val Glu Leu Asp Ala
 530 535 540
 Gln Glu Tyr Glu Leu Leu Val Leu Pro Glu Ala Phe Thr Ile His Leu
 545 550 555 560

a1

Pro His Ala Pro Ser Leu Asp Ile Ser Arg Phe Arg Ser Ser Pro Thr
565 570 575

Tyr Arg Asp Cys Leu Gln Ala Leu Lys Asp Glu Phe His Gln Asp Leu
580 585 590

Ser Arg His His Gly Ala Ala Ala Leu Lys Tyr Leu Pro Ala Leu Gln
595 600 605

Gln Pro Gln Ser Pro Ala Arg Gly
610 615

<210> 7
<211> 812
<212> DNA
<213> Homo sapiens

a1

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gcggaggctg tagtgagcca agattgtgcc actgcactcc agcctgggca acaaagtgag 180
actcttatct tacaagaaaa aaaagaatgc ttaggaatca actcccctcc taatgcccag 240
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agagcagggtg gcacagtaat aaatggcatc ccccgagtca cagcagggct tgttacaagt 420
cagcttgaag agcgaccagt tattctcatt gaagtggagc tcctttttct ggccgccccat 480
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ccctttgcac tggaggccag ggctcccgc ggcgcctctg ttgcccgcga gccctgctgc 720
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<210> 8
<211> 132
<212> PRT
<213> Homo sapiens

<400> 8
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1 5 10 15

His Ser Arg Met Gln Gly Gly Ser Gly Thr Tyr Phe His Ser Ile Gly
20 25 30

Ala Ala Gly Val Leu Arg Ala Gly Gly Thr Val Ile Asn Gly Ile Pro
35 40 45

Arg Val Thr Ala Gly Leu Val Thr Ser Gln Leu Glu Glu Arg Pro Val
50 55 60

Ile Leu Ile Glu Val Glu Leu Leu Phe Leu Ala Ala His Glu Glu Val
65 70 75 80

Leu Thr Phe Gly Tyr Lys Ala Gly Gln Gly Leu Gly Val Glu Ser Pro

85

90

95

Gln Leu Gly Ile Gly Ala Leu Leu Ala Ala Asp Val Ala Gln Glu Thr
 100 105 110

Val Gln Leu Lys Leu Gly Ala Pro Gly Gly Gly Leu Thr Gly His Ala
 115 120 125

Gln Leu Gly Gly
 130

<210> 9

<211> 2059

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)

<223> Where n is an A, T, G, or C

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 ctctgcccc tgggggctat gggcagccat ctgtcctgcc aggagggtat cctgcctacc 180
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2059

<210> 10
<211> 320
<212> PRT
<213> Homo sapiens

<400> 10
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Tyr Pro Gly Pro Leu Pro Pro Gly Gly Tyr Gly Gln Pro Ser Val Leu
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Pro Gly Gly Tyr Pro Ala Tyr Pro Gly Tyr Pro Gln Pro Gly Tyr Gly
35 40 45
His Pro Ala Gly Tyr Pro Gln Pro Met Pro Pro Thr His Pro Met Pro
50 55 60
Met Asn Tyr Gly Pro Gly His Gly Tyr Asp Gly Glu Glu Arg Ala Val
65 70 75 80
Ser Asp Ser Phe Gly Pro Gly Glu Trp Asp Asp Arg Lys Val Arg His
85 90 95
Thr Phe Ile Arg Lys Val Tyr Ser Ile Ile Ser Val Gln Leu Leu Ile
100 105 110
Thr Val Ala Ile Ile Ala Ile Phe Thr Phe Val Glu Pro Val Ser Ala
115 120 125
Phe Val Arg Arg Asn Val Ala Val Tyr Tyr Val Ser Tyr Ala Val Phe
130 135 140
Val Val Thr Tyr Leu Ile Leu Ala Cys Cys Gln Gly Pro Arg Arg Arg
145 150 155 160
Phe Pro Trp Asn Ile Ile Leu Leu Thr Leu Phe Thr Phe Ala Met Gly
165 170 175
Phe Met Thr Gly Thr Ile Ser Ser Met Tyr Gln Thr Lys Ala Val Ile
180 185 190
Ile Ala Met Ile Ile Thr Ala Val Val Ser Ile Ser Val Thr Ile Phe
195 200 205
Cys Phe Gln Thr Lys Val Arg Ala Trp Arg Ala Leu Pro Trp Pro Pro
210 215 220
Asp Ser Pro Phe Leu Ser Gly Pro Asp Pro Gly Thr Leu Gly Met Phe
225 230 235 240
Pro Arg Asp Leu Ile Pro Phe Ser Ser Ser Ala Pro Thr Lys Leu Cys
245 250 255

Pro Val Ser Val Leu Arg Met Leu Trp Thr Phe Pro Tyr Pro Leu Gly
 260 265 270

Gly Ser Thr Gly Thr Pro Trp Gln Gly Gln Ser Asp Trp Ala Gly Cys
 275 280 285

His Ser His Leu Thr Gly Ala Ser Phe Leu Leu Pro Gly Arg Trp Thr
 290 295 300

Ser Pro Arg Ala Gln Ala Ser Ser Val Ser Trp Glu Leu Cys Ser Trp
 305 310 315 320

<210> 11
 <211> 807
 <212> DNA
 <213> Homo sapiens

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 cacctgccct gtagccatat ggtcttttcc cctcgcacaa agcagagcat ctgccatgca 660
 cagggggcccc cacagggcaa cggagtttgg aaagtttcaa ttttccgaat tgccagttgt 720
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 gaaatagaat agaaaatatc caaaaaa 807

<210> 12
 <211> 135
 <212> PRT
 <213> Homo sapiens

<400> 12
 Met Gly Glu Leu Phe Glu Cys Val Leu Phe Thr Ala Ser Leu Ala Lys
 1 5 10 15

Tyr Ala Asp Pro Val Ala Asp Leu Leu Asp Lys Trp Gly Ala Phe Arg
 20 25 30

Ala Arg Leu Phe Arg Glu Ser Cys Val Phe His Arg Gly Asn Tyr Val
 35 40 45

Lys Asp Leu Ser Arg Leu Gly Arg Asp Leu Arg Arg Val Leu Ile Leu
 50 55 60

Asp Asn Ser Pro Ala Ser Tyr Val Phe His Pro Asp Asn Ala Val Ser

65		70		75		80
Ala Gly Trp Thr Gly Thr Gly Thr Gly Ala Glu Thr Gln Glu Gly Val						
	85		90		95	
Ser Pro Phe Arg Pro Pro Trp Pro Leu Gly Ser Pro Val Gly Gly Trp						
	100		105		110	
Val Pro Ser Gln Ser Phe Leu His Ser Leu Pro Val Pro Ala Ala His						
	115		120		125	
Ser Pro His Pro Pro Ala Leu						
	130		135			

<210> 13
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 <212> DNA
 <213> Homo sapiens

<400> 13

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 ctgaggagag ccgcccgcct cgacggaacc ccggggggcc ggccccgggg accacaaccg 180
 ctccgactgc ggcccgagc cgccgcccgc cgccaagtgc cgagctcttg catgtggcca 240
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 accagctcaa gcccaggtc tcctggatcc ccaacaagca ctactccggc ctctatgggc 480
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 ctgacacgca ggcgatcggg cttgtggaga accagagtga ctggtacctg ggcaacctct 660
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 gggagctcct tagcctgcct gccacctcac tggctgacca ggacatcttc aacgctgtga 840
 tcaaggagca cccggggcta gtgcagcgctc tgccttgtgt ctggaatgtg cagctgtcag 900
 atcacacact ggccgagcgc tgctactctg aggcgtctga cctcaagggtg atccactgga 960
 actcacaaa gaagcttcgg gtgaagaaca agcatgtgga attcttcgc aatttctacc 1020
 tgaccttcct ggagtacgat gggaacctgc tgcggagaga gctctttgtg tgccccagcc 1080
 agccccacc tgggtgctgag cagttgcagc aggcctggc acaactggac gaggaagacc 1140
 cctgctttga gttccggcag cagcagctca ctgtgcaccg tgtgcatgtc actttcctgc 1200
 cccatgaacc gccaccccc cggcctcacg atgtcaccct tgtggcccag ctgtccatgg 1260
 accggctgca gatgttgga ggcctgtgca ggcactggcc tggcccatg agcctggcct 1320
 tgtacctgac agacgcagaa gctcagcagt tcctgcattt cgtcgaggcc tcaccagtgc 1380
 ttgctgcccg gcaggacgtg gcctaccatg tgggtgtaccg tgagggggccc ctataccccg 1440
 tcaaccagct tcgcaacgtg gccttgccc aggcctcac gccttacgtc ttcctcagt 1500
 acattgactt cctgcctgcc tattctctct acgactacct cagggcctcc attgagcagc 1560
 tggggctggg cagccggcgc aaggcagcac tgggtggtgcc ggcatttgag accctgcgct 1620
 accgcttcag cttcccccat tccaagggtg agctgttggc cttgctggat gcgggcactc 1680
 tctacacctt cagggtaccac gagtggcccc gagggcacgc acccacagac tatgcccgt 1740
 ggcgggaggc tcaggccccg taccgtgtgc aatggggcgc caactatgaa ccctacgtgg 1800
 tgggtgccacg agactgtccc cgctatgac ctgccttctg gggcttcggc tggaaacaa 1860
 tggcccatat tgtggagctg gatgcccagg aatatgagct cctggtgctg ccgaggcct 1920
 tcaccatcca tctgcccac gctccaagcc tggacatctc ccgcttcgc tccagcccca 1980
 cctatcgtga ctgcctccag gccctcaagg acgaattcca ccaggacttg tcccgcacc 2040
 atggggctgc tgccctcaa tacctcccag ccctgcagca gcccagagc cctgcccag 2100
 gctgaggctg ggccggcgct gccctcatc ttagcattgg gcagacacca gggcaacctg 2160

ccctccgcca tccctgctat ttaaattatt taaggtctct gggaagggct ggggcagagc 2220
atctgtgggg tgggggtcttc cccttgctgc tattgtatgg ctgggggactg gtctctctct 2280
gccccagcca gtttggggct ggttccccca tcttgaattg tttatccctt tttcataatt 2340
aaagttttta aacatca 2357

<210> 14
<211> 695
<212> PRT
<213> Homo sapiens

<400> 14

Met Leu Pro Arg Gly Arg Pro Arg Ala Leu Gly Ala Ala Ala Leu Leu
1 5 10 15
Leu Leu Leu Leu Leu Leu Gly Phe Leu Leu Phe Gly Gly Asp Leu Gly
20 25 30
Arg Glu Ala Ala Glu Ser Arg Arg Pro Arg Arg Asn Pro Gly Gly Pro
35 40 45
Ala Pro Gly Thr Thr Thr Ala Pro Thr Ala Ala Arg Ser Arg Arg Arg
50 55 60
Pro Pro Lys Cys Glu Leu Leu His Val Ala Ile Val Cys Ala Gly His
65 70 75 80
Asn Ser Ser Arg Asp Val Ile Ile Leu Val Lys Ser Met Leu Phe Tyr
85 90 95
Arg Lys Asn Pro Leu His Leu His Leu Val Thr Asp Ala Val Ala Arg
100 105 110
Asn Ile Leu Glu Thr Leu Phe His Thr Trp Met Val Pro Ala Val Arg
115 120 125
Val Ser Phe Tyr His Ala Asp Gln Leu Lys Pro Gln Val Ser Trp Ile
130 135 140
Pro Asn Lys His Tyr Ser Gly Leu Tyr Gly Leu Met Lys Leu Val Leu
145 150 155 160
Pro Ser Ala Leu Pro Ala Glu Leu Ala Arg Val Ile Val Leu Asp Thr
165 170 175
Asp Val Thr Phe Ala Ser Asp Ile Ser Glu Leu Trp Ala Leu Phe Ala
180 185 190
His Phe Ser Asp Thr Gln Ala Ile Gly Leu Val Glu Asn Gln Ser Asp
195 200 205
Trp Tyr Leu Gly Asn Leu Trp Lys Asn His Arg Pro Trp Pro Ala Leu
210 215 220
Gly Arg Gly Phe Asn Thr Gly Val Ile Leu Leu Arg Leu Asp Arg Leu
225 230 235 240

Arg Gln Ala Gly Trp Glu Gln Met Trp Arg Leu Thr Ala Arg Arg Glu
 245 250 255
 Leu Leu Ser Leu Pro Ala Thr Ser Leu Ala Asp Gln Asp Ile Phe Asn
 260 265 270
 Ala Val Ile Lys Glu His Pro Gly Leu Val Gln Arg Leu Pro Cys Val
 275 280 285
 Trp Asn Val Gln Leu Ser Asp His Thr Leu Ala Glu Arg Cys Tyr Ser
 290 295 300
 Glu Ala Ser Asp Leu Lys Val Ile His Trp Asn Ser Pro Lys Lys Leu
 305 310 315 320
 Arg Val Lys Asn Lys His Val Glu Phe Phe Arg Asn Phe Tyr Leu Thr
 325 330 335
 Phe Leu Glu Tyr Asp Gly Asn Leu Leu Arg Arg Glu Leu Phe Val Cys
 340 345 350
 Pro Ser Gln Pro Pro Pro Gly Ala Glu Gln Leu Gln Gln Ala Leu Ala
 355 360 365
 Gln Leu Asp Glu Glu Asp Pro Cys Phe Glu Phe Arg Gln Gln Gln Leu
 370 375 380
 Thr Val His Arg Val His Val Thr Phe Leu Pro His Glu Pro Pro Pro
 385 390 395 400
 Pro Arg Pro His Asp Val Thr Leu Val Ala Gln Leu Ser Met Asp Arg
 405 410 415
 Leu Gln Met Leu Glu Ala Leu Cys Arg His Trp Pro Gly Pro Met Ser
 420 425 430
 Leu Ala Leu Tyr Leu Thr Asp Ala Glu Ala Gln Gln Phe Leu His Phe
 435 440 445
 Val Glu Ala Ser Pro Val Leu Ala Ala Arg Gln Asp Val Ala Tyr His
 450 455 460
 Val Val Tyr Arg Glu Gly Pro Leu Tyr Pro Val Asn Gln Leu Arg Asn
 465 470 475 480
 Val Ala Leu Ala Gln Ala Leu Thr Pro Tyr Val Phe Leu Ser Asp Ile
 485 490 495
 Asp Phe Leu Pro Ala Tyr Ser Leu Tyr Asp Tyr Leu Arg Ala Ser Ile
 500 505 510
 Glu Gln Leu Gly Leu Gly Ser Arg Arg Lys Ala Ala Leu Val Val Pro
 515 520 525
 Ala Phe Glu Thr Leu Arg Tyr Arg Phe Ser Phe Pro His Ser Lys Val
 530 535 540

Q1

Glu Leu Leu Ala Leu Leu Asp Ala Gly Thr Leu Tyr Thr Phe Arg Tyr
 545 550 555 560
 His Glu Trp Pro Arg Gly His Ala Pro Thr Asp Tyr Ala Arg Trp Arg
 565 570 575
 Glu Ala Gln Ala Pro Tyr Arg Val Gln Trp Ala Ala Asn Tyr Glu Pro
 580 585 590
 Tyr Val Val Val Pro Arg Asp Cys Pro Arg Tyr Asp Pro Arg Phe Val
 595 600 605
 Gly Phe Gly Trp Asn Lys Val Ala His Ile Val Glu Leu Asp Ala Gln
 610 615 620
 Glu Tyr Glu Leu Leu Val Leu Pro Glu Ala Phe Thr Ile His Leu Pro
 625 630 635 640
 His Ala Pro Ser Leu Asp Ile Ser Arg Phe Arg Ser Ser Pro Thr Tyr
 645 650 655
 Arg Asp Cys Leu Gln Ala Leu Lys Asp Glu Phe His Gln Asp Leu Ser
 660 665 670
 Arg His His Gly Ala Ala Ala Leu Lys Tyr Leu Pro Ala Leu Gln Gln
 675 680 685
 Pro Gln Ser Pro Ala Arg Gly
 690 695

<210> 15
 <211> 579
 <212> DNA
 <213> Homo sapiens

<400> 15
 tatggaataa agaaccatga cggagtccea tgcgcagcca gagaagagac caccacccga 60
 gagaggtttc atcctaccat gtaactctgc ttacagccta cttgcttctc accggcgtgc 120
 tggggacagc aaagtctgag gactctgggt ggtgtgggcc tgtgtgcaag gagagcagtg 180
 gccatgggat aaggcctctg cacagctcta gaagcttcaa tcccatttcc acccatacat 240
 ctctttgtgc tctcacaccc ccacagccct tctggaataa gaccatcaca gcacagggtt 300
 tgcaagatgt ctaatgccag tcattcacag ggcagctcag accctggcct gcggtgcata 360
 ctaggtgact ccacatgagg tgtcatgcta gatcctgcag ggagaataag cacacacagg 420
 cccgtgaccc atgctgtgga cttcatgttc taggaggtag agggagacag acaagaatca 480
 aatgactgta ctaggccggg cgcactggct cagcctgta atcccagcac tttggggagg 540
 ccgaggcagg tggatcacga ggccaggcgt tcgagacca 579

<210> 16
 <211> 656
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (570)..(576)

<223> Where n is an A, T, C, or G

<400> 16

```
atgaccatgc atccatttac agtaaaggga ttgcctacat ctcagacaac acttcatgta 60
aagtacacaa atcaaggaaa cagcttcac actgatgtta cctttaatct aacaagatct 120
ctataaaaca agaaaacctc tacgtacaga tcttttaaaa ttaaagcagg catctttgct 180
gatccacctc tataagttgc aggttgagta tctcttatct gaaatgctag agaccagaag 240
tgtttcagggt ttcagatatt tagattttgg aatatttgca tatacacgag atatccaggg 300
gaagagaccc aagtctaaac atgaaattca tttatgtttc atatacacct catatatata 360
tagcctgaag gtaattttat acagtattta taatttgtcc aaggaacaaa gttttgactg 420
tgttttgact atgactcgtc atgtgaagtc atatgtggaa ttttccactt gtggcatcac 480
acaggcactc aaaaagcttc agatttgga gcatattgga tttcgcatat tcagattagg 540
gatgctcaac ccatactcag tttaccagtn nnnnnncata atgtttgcaa ttactcctcc 600
ttttaaatat ataattattt ttggtatggg ggaaaagagt gagaacttta tttcac 656
```

<210> 17

<211> 656

<212> DNA

<213> Homo sapiens

<400> 17

```
atgaccatgc atccatttac agtaaaggga ttgcctacat ctcagacaac acttcatgta 60
aagtacacaa atcaaggaaa cagcttcac actgatgtta cctttaatct aacaagatct 120
ctataaaaca agaaaacctc tacgtacaga tcttttaaaa ttaaagcagg catctttgct 180
gatccacctc tataagttgc aggttgagta tctcttatct gaaatgctag agaccagaag 240
tgtttcagggt ttcagatatt tagattttgg aatatttgca tatacacgag atatccaggg 300
gaagagaccc aagtctaaac atgaaattca tttatgtttc atatacacct catatatata 360
tagcctgaag gtaattttat acagtattta taatttgtcc aaggaacaaa gttttgactg 420
tgttttgact atgactcgtc atgtgaagtc atatgtggaa ttttccactt gtggcatcac 480
acaggcactc aaaaagcttc agatttgga gcatattgga tttcgcatat tcagattagg 540
gatgctcaac ccatactcag tttaccagta aaaaaacata atgtttgcaa ttactcctcc 600
ttttaaatat ataattattt ttggtatggg ggaaaagagt gagaacttta tttcac 656
```

<210> 18

<211> 164

<212> DNA

<213> Homo sapiens

<400> 18

```
taaaaatata aaaaattagc cgggcgtagt ggcgggcgcc tgtagtccca gctacttggg 60
aggctgagggc aggagaatgg cgtgaacccg ggaggcagag cttgcagtga gccgagatcc 120
cgccactgca ctccagcctg ggcgacagag cgagactccg tctc 164
```

<210> 19

<211> 164

<212> DNA

<213> Homo sapiens

<400> 19

```
taaaaatata aaaaattagc cgggcgtagt ggcgggcgcc tgtagtccca gctacttggg 60
aggctgagggc aggagaatgg cgtgaacccg ggaggcagag cttgcagtga gccgagatcc 120
cgccactgca ctccagcctg ggcgacagag cgagactccg tctc 164
```

<210> 20
 <211> 164
 <212> DNA
 <213> Homo sapiens

<400> 20
 taaaaatatac aaaaattagc cgggcgtagt ggcgggcgcc tgtagtccca gctacttggg 60
 aggctgaggc aggagaatgg cgtgaacccg ggaggcagag cttgcagtga gccgagatcc 120
 cgccactgca ctccagcctg ggcgacagag cgagactccg tctc 164

<210> 21
 <211> 164
 <212> DNA
 <213> Homo sapiens

<400> 21
 taaaaatatac aaaaattagc cgggcgtagt ggcgggcgcc tgtagtccca gctacttggg 60
 aggctgaggc aggagaatgg cgtgaacccg ggaggcagag cttgcagtga gccgagatcc 120
 cgccactgca ctccagcctg ggcgacagag cgagactccg tctc 164

<210> 22
 <211> 455
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> (260)..(274)
 <223> Where Xaa is any amino acid as defined in the
 specification

<220>
 <221> VARIANT
 <222> (295)..(304)
 <223> Where Xaa is any amino acid as defined in the
 specification

<400> 22
 His Leu His Leu Val Thr Asp Ala Val Ala Arg Asn Ile Leu Glu Thr
 1 5 10 15
 Leu Phe His Thr Trp Met Val Pro Ala Ile Asp Pro Val Ser Pro Tyr
 20 25 30
 His Ala Asp Gln Leu Lys Pro Gln Val Ser Trp Ile Pro Asn Lys His
 35 40 45
 Tyr Ser Gly Leu Tyr Gly Leu Met Lys Leu Val Leu Pro Asn Ala Leu
 50 55 60
 Pro Ala Glu Leu Ala Arg Val Ile Val Leu Asp Thr Asp Val Thr Phe
 65 70 75 80
 Ala Ser Asp Ile Ser Glu Leu Trp Ala Leu Phe Ala His Phe Ser Asp
 85 90 95

Thr Gln Ala Ile Gly Leu Val Glu Asn Gln Ser Asp Trp Tyr Leu Gly
 100 105 110
 Asn Leu Trp Leu Asn His Arg Pro Trp Pro Ala Leu Gly Arg Gly Phe
 115 120 125
 Asn Thr Gly Val Ile Leu Leu Arg Leu Asp Arg Leu Arg Gln Ala Gly
 130 135 140
 Trp Glu Gln Met Trp Arg Leu Thr Ala Arg Arg Glu Leu Leu Ser Leu
 145 150 155 160
 Pro Ala Thr Ser Leu Ala Asp Gln Asp Ile Phe Asn Ala Val Ile Lys
 165 170 175
 Glu His Pro Gly Leu Val Gln Arg Leu Pro Cys Val Trp Asn Val Gln
 180 185 190
 Leu Ser Asp His Thr Leu Ala Glu Arg Cys Tyr Ser Glu Ala Ser Asp
 195 200 205
 Leu Lys Val Ile His Trp Asn Ser Pro Lys Lys Leu Arg Val Lys Asn
 210 215 220
 Lys His Val Glu Phe Phe Arg Asn Phe Tyr Leu Thr Phe Leu Glu Tyr
 225 230 235 240
 Asp Gly Asn Leu Leu Arg Arg Glu Leu Phe Val Cys Pro Ser Gln Pro
 245 250 255
 Pro Pro Gly Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 260 265 270
 Xaa Xaa Pro Cys Phe Glu Phe Arg Gln Gln Gln Leu Thr Val His Arg
 275 280 285
 Val His Val Thr Phe Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 290 295 300
 Asp Val Thr Leu Val Ala Gln Leu Ser Met Asp Arg Leu Gln Met Leu
 305 310 315 320
 Glu Ala Leu Cys Arg His Thr Pro Gly Pro Met Ser Leu Ala Leu Tyr
 325 330 335
 Leu Thr Asp Ala Glu Ala Gln Gln Phe Leu His Phe Val Glu Ala Ser
 340 345 350
 Pro Val Leu Ala Ala Arg Gln Asp Val Ala Tyr His Val Val Tyr Arg
 355 360 365
 Glu Gly Pro Leu Tyr Pro Val Asn Gln Leu Arg Asn Val Ala Leu Ala
 370 375 380
 Gln Ala Leu Thr Pro Tyr Val Phe Leu Ser Asp Ile Asp Phe Leu Pro
 385 390 395 400

Ala Tyr Ser Leu Tyr Asp Tyr Leu Arg Ala Ser Ile Glu Gln Leu Gly
405 410 415
Leu Gly Ser Arg Arg Lys Ala Ala Leu Val Val Pro Ala Phe Glu Thr
420 425 430
Leu Arg Tyr Arg Phe Ser Phe Pro His Ser Lys Val Glu Leu Leu Ala
435 440 445
Leu Leu Asp Ala Gly Thr Leu
450 455

<210> 23
<211> 454
<212> PRT
<213> Homo sapiens

<400> 23
His Phe His Leu Ile Ala Asp Ser Ile Ala Glu Gln Ile Leu Ala Thr
1 5 10 15

Leu Phe Gln Thr Trp Met Val Pro Ala Val Arg Val Asp Phe Tyr Asn
20 25 30

Ala Asp Glu Leu Lys Ser Glu Val Ser Trp Ile Pro Asn Lys His Tyr
35 40 45

Ser Gly Ile Tyr Gly Leu Met Lys Leu Val Leu Thr Lys Thr Leu Pro
50 55 60

Ala Asn Leu Glu Arg Val Ile Val Leu Asp Thr Asp Ile Thr Phe Ala
65 70 75 80

Thr Asp Ile Ala Glu Leu Trp Ala Val Phe His Lys Phe Lys Gly Gln
85 90 95

Gln Val Leu Gly Leu Val Glu Asn Gln Ser Asp Trp Tyr Leu Gly Asn
100 105 110

Leu Trp Lys Asn His Arg Pro Trp Pro Ala Leu Gly Arg Gly Tyr Asn
115 120 125

Thr Gly Val Ile Leu Leu Leu Leu Asp Lys Leu Arg Lys Met Lys Trp
130 135 140

Glu Gln Met Trp Arg Leu Thr Ala Glu Arg Glu Leu Met Gly Met Leu
145 150 155 160

Ser Thr Ser Leu Ala Asp Gln Asp Ile Phe Asn Ala Val Ile Lys Gln
165 170 175

Asn Pro Phe Leu Val Tyr Gln Leu Pro Cys Phe Trp Asn Val Gln Leu
180 185 190

Ser Asp His Thr Arg Ser Glu Gln Cys Tyr Arg Asp Val Ser Asp Leu

195 200 205
 Lys Val Ile His Trp Asn Ser Pro Lys Lys Leu Arg Val Lys Asn Lys
 210 215 220
 His Val Glu Phe Phe Arg Asn Leu Tyr Leu Thr Phe Leu Glu Tyr Asp
 225 230 235 240
 Gly Asn Leu Leu Arg Arg Glu Leu Phe Gly Cys Pro Ser Glu Thr Asp
 245 250 255
 Val Asn Asn Glu Asn Leu Gln Lys Gln Leu Ser Glu Leu Asp Glu Asp
 260 265 270
 Asp Leu Cys Tyr Glu Phe Arg Arg Glu Arg Phe Thr Val His Arg Thr
 275 280 285
 His Leu Tyr Phe Leu His Tyr Glu Phe Glu Pro Ser Ala Asp Asn Thr
 290 295 300
 Asp Val Thr Leu Val Ala Gln Leu Ser Met Asp Arg Leu Gln Met Leu
 305 310 315 320
 Glu Ala Ile Cys Lys His Trp Glu Gly Pro Ile Ser Leu Ala Leu Tyr
 325 330 335
 Leu Ser Asp Ala Glu Ala Gln Gln Phe Leu Arg Tyr Ala Gln Gly Ser
 340 345 350
 Glu Val Leu Met Ser Arg Gln Asn Val Gly Tyr His Ile Val Tyr Lys
 355 360 365
 Glu Gly Gln Phe Tyr Pro Val Asn Leu Leu Arg Asn Val Ala Met Lys
 370 375 380
 His Ile Ser Thr Pro Tyr Met Phe Leu Ser Asp Ile Asp Phe Leu Pro
 385 390 395 400
 Met Tyr Gly Leu Tyr Glu Tyr Leu Arg Lys Ser Val Ile Gln Leu Asp
 405 410 415
 Leu Ala Asn Thr Lys Lys Ala Met Ile Val Pro Ala Phe Glu Thr Leu
 420 425 430
 Arg Tyr Arg Leu Ser Phe Pro Lys Ser Lys Ala Glu Leu Leu Ser Met
 435 440 445
 Leu Asp Met Gly Thr Leu
 450

<210> 24
 <211> 585
 <212> PRT
 <213> Homo sapiens
 <220>

<221> VARIANT
 <222> (260)..(274)
 <223> Where Xaa is any amino acid as defined in the
 specification

<220>
 <221> VARIANT
 <222> (295)..(304)
 <223> Where Xaa is any amino acid as defined in the
 specification

<400> 24
 His Leu His Leu Val Thr Asp Ala Val Ala Arg Asn Ile Leu Glu Thr
 1 5 10 15
 Leu Phe His Thr Trp Met Val Pro Ala Ile Asp Pro Val Ser Pro Tyr
 20 25 30
 His Ala Asp Gln Leu Lys Pro Gln Val Ser Trp Ile Pro Asn Lys His
 35 40 45
 Tyr Ser Gly Leu Tyr Gly Leu Met Lys Leu Val Leu Pro Asn Ala Leu
 50 55 60
 Pro Ala Glu Leu Ala Arg Val Ile Val Leu Asp Thr Asp Val Thr Phe
 65 70 75 80
 Ala Ser Asp Ile Ser Glu Leu Trp Ala Leu Phe Ala His Phe Ser Asp
 85 90 95
 Thr Gln Ala Ile Gly Leu Val Glu Asn Gln Ser Asp Trp Tyr Leu Gly
 100 105 110
 Asn Leu Trp Leu Asn His Arg Pro Trp Pro Ala Leu Gly Arg Gly Phe
 115 120 125
 Asn Thr Gly Val Ile Leu Leu Arg Leu Asp Arg Leu Arg Gln Ala Gly
 130 135 140
 Trp Glu Gln Met Trp Arg Leu Thr Ala Arg Arg Glu Leu Leu Ser Leu
 145 150 155 160
 Pro Ala Thr Ser Leu Ala Asp Gln Asp Ile Phe Asn Ala Val Ile Lys
 165 170 175
 Glu His Pro Gly Leu Val Gln Arg Leu Pro Cys Val Trp Asn Val Gln
 180 185 190
 Leu Ser Asp His Thr Leu Ala Glu Arg Cys Tyr Ser Glu Ala Ser Asp
 195 200 205
 Leu Lys Val Ile His Trp Asn Ser Pro Lys Lys Leu Arg Val Lys Asn
 210 215 220
 Lys His Val Glu Phe Phe Arg Asn Phe Tyr Leu Thr Phe Leu Glu Tyr
 225 230 235 240

Asp Gly Asn Leu Leu Arg Arg Glu Leu Phe Val Cys Pro Ser Gln Pro
 245 250 255
 Pro Pro Gly Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 260 265 270
 Xaa Xaa Pro Cys Phe Glu Phe Arg Gln Gln Gln Leu Thr Val His Arg
 275 280 285
 Val His Val Thr Phe Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
 290 295 300
 Asp Val Thr Leu Val Ala Gln Leu Ser Met Asp Arg Leu Gln Met Leu
 305 310 315 320
 Glu Ala Leu Cys Arg His Thr Pro Gly Pro Met Ser Leu Ala Leu Tyr
 325 330 335
 Leu Thr Asp Ala Glu Ala Gln Gln Phe Leu His Phe Val Glu Ala Ser
 340 345 350
 Pro Val Leu Ala Ala Arg Gln Asp Val Ala Tyr His Val Val Tyr Arg
 355 360 365
 Glu Gly Pro Leu Tyr Pro Val Asn Gln Leu Arg Asn Val Ala Leu Ala
 370 375 380
 Gln Ala Leu Thr Pro Tyr Val Phe Leu Ser Asp Ile Asp Phe Leu Pro
 385 390 395 400
 Ala Tyr Ser Leu Tyr Asp Tyr Leu Arg Ala Ser Ile Glu Gln Leu Gly
 405 410 415
 Leu Gly Ser Arg Arg Lys Ala Ala Leu Val Val Pro Ala Phe Glu Thr
 420 425 430
 Leu Arg Tyr Arg Phe Ser Phe Pro His Ser Lys Val Glu Leu Leu Ala
 435 440 445
 Leu Leu Asp Ala Gly Thr Leu Tyr Thr Phe Arg Tyr Gly Glu Trp Pro
 450 455 460
 Arg Gly His Ala Pro Thr Asp Tyr Ala Arg Trp Arg Glu Ala Gln Ala
 465 470 475 480
 Pro Tyr Arg Val Gln Trp Ala Ala Asn Tyr Glu Pro Tyr Val Val Val
 485 490 495
 Pro Arg Asp Cys Pro Arg Tyr Asp Pro Arg Phe Val Gly Phe Gly Trp
 500 505 510
 Asn Lys Val Ala His Ile Val Glu Leu Asp Ala Gln Glu Tyr Glu Leu
 515 520 525
 Leu Val Leu Pro Glu Ala Phe Thr Ile His Leu Pro His Ala Pro Ser
 530 535 540

Leu Asp Ile Ser Arg Phe Arg Ser Ser Pro Thr Tyr Arg Asp Cys Leu
545 550 555 560

Gln Ala Leu Lys Asp Glu Phe His Gln Asp Leu Ser Arg His His Gly
565 570 575

Ala Ala Ala Leu Lys Tyr Leu Pro Ala
580 585

<210> 25
<211> 584
<212> PRT
<213> Homo sapiens

<400> 25
His Phe His Leu Ile Ala Asp Ser Ile Ala Glu Gln Ile Leu Ala Thr
1 5 10 15

Leu Phe Gln Thr Trp Met Val Pro Ala Val Arg Val Asp Phe Tyr Asn
20 25 30

Ala Asp Glu Leu Lys Ser Glu Val Ser Trp Ile Pro Asn Lys His Tyr
35 40 45

Q1 Ser Gly Ile Tyr Gly Leu Met Lys Leu Val Leu Thr Lys Thr Leu Pro
50 55 60

Ala Asn Leu Glu Arg Val Ile Val Leu Asp Thr Asp Ile Thr Phe Ala
65 70 75 80

Thr Asp Ile Ala Glu Leu Trp Ala Val Phe His Lys Phe Lys Gly Gln
85 90 95

Gln Val Leu Gly Leu Val Glu Asn Gln Ser Asp Trp Tyr Leu Gly Asn
100 105 110

Leu Trp Lys Asn His Arg Pro Trp Pro Ala Leu Gly Arg Gly Tyr Asn
115 120 125

Thr Gly Val Ile Leu Leu Leu Leu Asp Lys Leu Arg Lys Met Lys Trp
130 135 140

Glu Gln Met Trp Arg Leu Thr Ala Glu Arg Glu Leu Met Gly Met Leu
145 150 155 160

Ser Thr Ser Leu Ala Asp Gln Asp Ile Phe Asn Ala Val Ile Lys Gln
165 170 175

Asn Pro Phe Leu Val Tyr Gln Leu Pro Cys Phe Trp Asn Val Gln Leu
180 185 190

Ser Asp His Thr Arg Ser Glu Gln Cys Tyr Arg Asp Val Ser Asp Leu
195 200 205

Lys Val Ile His Trp Asn Ser Pro Lys Lys Leu Arg Val Lys Asn Lys
210 215 220

His Val Glu Phe Phe Arg Asn Leu Tyr Leu Thr Phe Leu Glu Tyr Asp
 225 230 235 240
 Gly Asn Leu Leu Arg Arg Glu Leu Phe Gly Cys Pro Ser Glu Ala Asp
 245 250 255
 Val Asn Ser Glu Asn Leu Gln Lys Gln Leu Ser Glu Leu Asp Glu Asp
 260 265 270
 Asp Leu Cys Tyr Glu Phe Arg Arg Glu Arg Phe Thr Val His Arg Thr
 275 280 285
 His Leu Tyr Phe Leu His Tyr Glu Tyr Glu Pro Ala Ala Asp Ser Thr
 290 295 300
 Asp Val Thr Leu Val Ala Gln Leu Ser Met Asp Arg Leu Gln Met Leu
 305 310 315 320
 Glu Ala Ile Cys Lys His Trp Glu Gly Pro Ile Ser Leu Ala Leu Tyr
 325 330 335
 Leu Ser Asp Ala Glu Ala Gln Gln Phe Leu Arg Tyr Ala Gln Gly Ser
 340 345 350
 Glu Val Leu Met Ser Arg His Asn Val Gly Tyr His Ile Val Tyr Lys
 355 360 365
 Glu Gly Gln Phe Tyr Pro Val Asn Leu Leu Arg Asn Val Ala Met Lys
 370 375 380
 His Ile Ser Thr Pro Tyr Met Phe Leu Ser Asp Ile Asp Phe Leu Pro
 385 390 395 400
 Met Tyr Gly Leu Tyr Glu Tyr Leu Arg Lys Ser Val Ile Gln Leu Asp
 405 410 415
 Leu Ala Asn Thr Lys Lys Ala Met Ile Val Pro Ala Phe Glu Thr Leu
 420 425 430
 Arg Tyr Arg Leu Ser Phe Pro Lys Ser Lys Ala Glu Leu Leu Ser Met
 435 440 445
 Leu Asp Met Gly Thr Leu Phe Thr Phe Arg Tyr His Val Trp Thr Lys
 450 455 460
 Gly His Ala Pro Thr Asn Phe Ala Lys Trp Arg Thr Ala Thr Thr Pro
 465 470 475 480
 Tyr Arg Val Glu Trp Glu Ala Asp Phe Glu Pro Tyr Val Val Val Arg
 485 490 495
 Arg Asp Cys Pro Glu Tyr Asp Arg Arg Phe Val Gly Phe Gly Trp Asn
 500 505 510
 Lys Val Ala His Ile Met Glu Leu Asp Val Gln Glu Tyr Glu Phe Ile
 515 520 525

Q1

Val Leu Pro Asn Ala Tyr Met Ile His Met Pro His Ala Pro Ser Phe
530 535 540

Asp Ile Thr Lys Phe Arg Ser Asn Lys Gln Tyr Arg Ile Cys Leu Lys
545 550 555 560

Thr Leu Lys Glu Glu Phe Gln Gln Asp Met Ser Arg Arg Tyr Gly Phe
565 570 575

Ala Ala Leu Lys Tyr Leu Thr Ala
580

<210> 26

<211> 189

<212> PRT

<213> Homo sapiens

Q1

<400> 26

Leu Ser Glu Leu Asp Glu Asp Asp Leu Cys Tyr Glu Phe Arg Arg Glu
1 5 10 15

Arg Phe Thr Val His Arg Thr His Leu Tyr Phe Leu His Tyr Glu Tyr
20 25 30

Glu Pro Ala Ala Asp Ser Thr Asp Val Thr Leu Val Ala Gln Leu Ser
35 40 45

Met Asp Arg Leu Gln Met Leu Glu Ala Ile Cys Lys His Trp Glu Gly
50 55 60

Pro Ile Ser Leu Ala Leu Tyr Leu Ser Asp Ala Glu Ala Gln Gln Phe
65 70 75 80

Leu Arg Tyr Ala Gln Gly Ser Glu Val Leu Met Ser Arg His Asn Val
85 90 95

Gly Tyr His Ile Val Tyr Lys Glu Gly Gln Phe Tyr Pro Val Asn Leu
100 105 110

Leu Arg Asn Val Ala Met Lys His Ile Ser Thr Pro Tyr Met Phe Leu
115 120 125

Ser Asp Ile Asp Phe Leu Pro Met Tyr Gly Leu Tyr Glu Tyr Leu Arg
130 135 140

Lys Ser Val Ile Gln Leu Asp Leu Ala Asn Thr Lys Lys Ala Met Ile
145 150 155 160

Val Pro Ala Phe Glu Thr Leu Arg Tyr Arg Leu Ser Phe Pro Lys Ser
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 <211> 189
 <212> PRT
 <213> Homo sapiens

<400> 27
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 35 40 45
 Asp Arg Leu Gln Met Leu Glu Ala Leu Cys Arg His Thr Pro Gly Pro
 50 55 60
 Met Ser Leu Ala Leu Tyr Leu Thr Asp Ala Glu Ala Gln Gln Phe Leu
 65 70 75 80
 His Phe Val Glu Ala Ser Pro Val Leu Ala Ala Arg Gln Asp Val Ala
 85 90 95
 Tyr His Val Val Tyr Arg Glu Gly Pro Leu Tyr Pro Val Asn Gln Leu
 100 105 110
 Arg Asn Val Ala Leu Ala Gln Ala Leu Thr Pro Tyr Val Phe Leu Ser
 115 120 125
 Asp Ile Asp Phe Leu Pro Ala Tyr Ser Leu Tyr Asp Tyr Leu Arg Ala
 130 135 140
 Ser Ile Glu Gln Leu Gly Leu Gly Ser Arg Arg Lys Ala Ala Leu Val
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 Val Pro Ala Phe Glu Thr Leu Arg Tyr Arg Phe Ser Phe Pro His Ser
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<213> Homo sapiens

<400> 29

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<211> 704

<212> DNA

<213> Homo sapiens

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<210> 31

<211> 704

<212> DNA

<213> Homo sapiens

<400> 31

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<210> 32

<211> 1006

<212> DNA

<213> Homo sapiens

<400> 32

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21

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<210> 34
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21

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 20 25 30
 Thr Gln Leu Val Leu Gly Asn Arg Lys His Thr Ile Ser Pro Glu Asp
 35 40 45
 Tyr Ile Thr Gly Ala Leu Gln Ile Tyr Thr Asp Ile Ile Tyr Ile Phe
 50 55 60
 Thr Phe Val Leu Gln Leu Met Gly
 65 70

<210> 39
 <211> 72
 <212> PRT
 <213> Rattus rattus

<400> 39
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20

25

30

Thr Gln Leu Leu Met Gly Asn Arg Arg His Ser Leu Ser Pro Glu Glu
 35 40 45

Tyr Ile Phe Gly Ala Leu Asn Ile Tyr Leu Asp Ile Ile Tyr Ile Phe
 50 55 60

Thr Phe Phe Leu Gln Leu Phe Gly
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 <213> Homo sapiens

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 <212> DNA
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 <212> DNA
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 <211> 619
 <212> PRT
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<400> 47
 Lys Cys Glu Leu Leu His Val Ala Ile Val Cys Ala Gly His Asn Ser
 1 5 10 15
 Ser Arg Asp Val Ile Ile Leu Val Lys Ser Met Leu Phe Tyr Arg Lys
 20 25 30
 Asn Pro Leu His Leu His Leu Val Thr Asp Ala Val Ala Arg Asn Ile
 35 40 45
 Leu Glu Thr Leu Phe His Thr Trp Met Val Pro Ala Val Arg Val Ser
 50 55 60
 Phe Tyr His Ala Asp Gln Leu Lys Pro Gln Val Ser Trp Ile Pro Asn
 65 70 75 80
 Lys His Tyr Ser Gly Leu Tyr Gly Leu Met Lys Leu Val Leu Pro Ser
 85 90 95
 Ala Leu Pro Ala Glu Leu Ala Arg Val Ile Val Leu Asp Thr Asp Val
 100 105 110
 Thr Phe Ala Ser Asp Ile Ser Glu Leu Trp Ala Leu Phe Ala His Phe
 115 120 125
 Ser Asp Thr Gln Ala Ile Gly Leu Val Glu Asn Gln Ser Asp Trp Tyr
 130 135 140
 Leu Gly Asn Leu Trp Lys Asn His Arg Pro Trp Pro Ala Leu Gly Arg
 145 150 155 160
 Gly Phe Asn Thr Gly Val Ile Leu Leu Arg Leu Asp Arg Leu Arg Gln
 165 170 175
 Ala Gly Trp Glu Gln Met Trp Arg Leu Thr Ala Arg Arg Glu Leu Leu
 180 185 190
 Ser Leu Pro Ala Thr Ser Leu Ala Asp Gln Asp Ile Phe Asn Ala Val
 195 200 205
 Ile Lys Glu His Pro Gly Leu Val Gln Arg Leu Pro Cys Val Trp Asn
 210 215 220
 Val Gln Leu Ser Asp His Thr Leu Ala Glu Arg Cys Tyr Ser Glu Ala
 225 230 235 240
 Ser Asp Leu Lys Val Ile His Trp Asn Ser Pro Lys Lys Leu Arg Val
 245 250 255

Lys Asn Lys His Val Glu Phe Phe Arg Asn Phe Tyr Leu Thr Phe Leu
 260 265 270
 Glu Tyr Asp Gly Asn Leu Leu Arg Arg Glu Leu Phe Val Cys Pro Ser
 275 280 285
 Gln Pro Pro Pro Gly Ala Glu Gln Leu Gln Gln Ala Leu Ala Gln Leu
 290 295 300
 Asp Glu Glu Asp Pro Cys Phe Glu Phe Arg Gln Gln Gln Leu Thr Val
 305 310 315 320
 His Arg Val His Val Thr Phe Leu Pro His Glu Pro Pro Pro Pro Arg
 325 330 335
 Pro His Asp Val Thr Leu Val Ala Gln Leu Ser Met Asp Arg Leu Gln
 340 345 350
 Met Leu Glu Ala Leu Cys Arg His Trp Pro Gly Pro Met Ser Leu Ala
 355 360 365
 Leu Tyr Leu Thr Asp Ala Glu Ala Gln Gln Phe Leu His Phe Val Glu
 370 375 380
 Ala Ser Pro Val Leu Ala Ala Arg Gln Asp Val Ala Tyr His Val Val
 385 390 395 400
 Tyr Arg Glu Gly Pro Leu Tyr Pro Val Asn Gln Leu Arg Asn Val Ala
 405 410 415
 Leu Ala Gln Ala Leu Thr Pro Tyr Val Phe Leu Ser Asp Ile Asp Phe
 420 425 430
 Leu Pro Ala Tyr Ser Leu Tyr Asp Tyr Leu Arg Ala Ser Ile Glu Gln
 435 440 445
 Leu Gly Leu Gly Ser Arg Arg Lys Ala Ala Leu Val Val Pro Ala Phe
 450 455 460
 Glu Thr Leu Arg Tyr Arg Phe Ser Phe Pro His Ser Lys Val Glu Leu
 465 470 475 480
 Leu Ala Leu Leu Asp Ala Gly Thr Leu Tyr Thr Phe Arg Tyr His Glu
 485 490 495
 Trp Pro Arg Gly His Ala Pro Thr Asp Tyr Ala Arg Trp Arg Glu Ala
 500 505 510
 Gln Ala Pro Tyr Arg Val Gln Trp Ala Ala Asn Tyr Glu Pro Tyr Val
 515 520 525
 Val Val Pro Arg Asp Cys Pro Arg Tyr Asp Pro Arg Phe Val Gly Phe
 530 535 540
 Gly Trp Asn Lys Val Ala His Ile Val Glu Leu Asp Ala Gln Glu Tyr
 545 550 555 560

Glu Leu Leu Val Leu Pro Glu Ala Phe Thr Ile His Leu Pro His Ala
565 570 575

Pro Ser Leu Asp Ile Ser Arg Phe Arg Ser Ser Pro Thr Tyr Arg Asp
580 585 590

Cys Leu Gln Ala Leu Lys Asp Glu Phe His Gln Asp Leu Ser Arg His
595 600 605

His Gly Ala Ala Ala Leu Lys Tyr Leu Pro Ala
610 615

<210> 48

<211> 619

<212> PRT

<213> Homo sapiens

<400> 48

Lys Cys Glu Thr Ile His Val Ala Ile Val Cys Ala Gly Tyr Asn Ala
1 5 10 15

Ser Arg Asp Val Val Thr Leu Val Lys Ser Val Leu Phe His Arg Arg
20 25 30

Asn Pro Leu His Phe His Leu Ile Ala Asp Ser Ile Ala Glu Gln Ile
35 40 45

Leu Ala Thr Leu Phe Gln Thr Trp Met Val Pro Ala Val Arg Val Asp
50 55 60

Phe Tyr Asn Ala Asp Glu Leu Lys Ser Glu Val Ser Trp Ile Pro Asn
65 70 75 80

Lys His Tyr Ser Gly Ile Tyr Gly Leu Met Lys Leu Val Leu Thr Lys
85 90 95

Thr Leu Pro Ala Asn Leu Glu Arg Val Ile Val Leu Asp Thr Asp Ile
100 105 110

Thr Phe Ala Thr Asp Ile Ala Glu Leu Trp Ala Val Phe His Lys Phe
115 120 125

Lys Gly Gln Gln Val Leu Gly Leu Val Glu Asn Gln Ser Asp Trp Tyr
130 135 140

Leu Gly Asn Leu Trp Lys Asn His Arg Pro Trp Pro Ala Leu Gly Arg
145 150 155 160

Gly Tyr Asn Thr Gly Val Ile Leu Leu Leu Leu Asp Lys Leu Arg Lys
165 170 175

Met Lys Trp Glu Gln Met Trp Arg Leu Thr Ala Glu Arg Glu Leu Met
180 185 190

Gly Met Leu Ser Thr Ser Leu Ala Asp Gln Asp Ile Phe Asn Ala Val

195 200 205
 Ile Lys Gln Asn Pro Phe Leu Val Tyr Gln Leu Pro Cys Phe Trp Asn
 210 215 220
 Val Gln Leu Ser Asp His Thr Arg Ser Glu Gln Cys Tyr Arg Asp Val
 225 230 235 240
 Ser Asp Leu Lys Val Ile His Trp Asn Ser Pro Lys Lys Leu Arg Val
 245 250 255
 Lys Asn Lys His Val Glu Phe Phe Arg Asn Leu Tyr Leu Thr Phe Leu
 260 265 270
 Glu Tyr Asp Gly Asn Leu Leu Arg Arg Glu Leu Phe Gly Cys Pro Ser
 275 280 285
 Glu Ala Asp Val Asn Ser Glu Asn Leu Gln Lys Gln Leu Ser Glu Leu
 290 295 300
 Asp Glu Asp Asp Leu Cys Tyr Glu Phe Arg Arg Glu Arg Phe Thr Val
 305 310 315 320
 His Arg Thr His Leu Tyr Phe Leu His Tyr Glu Tyr Glu Pro Ala Ala
 325 330 335
 Asp Ser Thr Asp Val Thr Leu Val Ala Gln Leu Ser Met Asp Arg Leu
 340 345 350
 Gln Met Leu Glu Ala Ile Cys Lys His Trp Glu Gly Pro Ile Ser Leu
 355 360 365
 Ala Leu Tyr Leu Ser Asp Ala Glu Ala Gln Gln Phe Leu Arg Tyr Ala
 370 375 380
 Gln Gly Ser Glu Val Leu Met Ser Arg His Asn Val Gly Tyr His Ile
 385 390 395 400
 Val Tyr Lys Glu Gly Gln Phe Tyr Pro Val Asn Leu Leu Arg Asn Val
 405 410 415
 Ala Met Lys His Ile Ser Thr Pro Tyr Met Phe Leu Ser Asp Ile Asp
 420 425 430
 Phe Leu Pro Met Tyr Gly Leu Tyr Glu Tyr Leu Arg Lys Ser Val Ile
 435 440 445
 Gln Leu Asp Leu Ala Asn Thr Lys Lys Ala Met Ile Val Pro Ala Phe
 450 455 460
 Glu Thr Leu Arg Tyr Arg Leu Ser Phe Pro Lys Ser Lys Ala Glu Leu
 465 470 475 480
 Leu Ser Met Leu Asp Met Gly Thr Leu Phe Thr Phe Arg Tyr His Val
 485 490 495
 Trp Thr Lys Gly His Ala Pro Thr Asn Phe Ala Lys Trp Arg Thr Ala

500	505	510
Thr Thr Pro Tyr Arg Val Glu Trp Glu Ala Asp Phe Glu Pro Tyr Val		
515	520	525
Val Val Arg Arg Asp Cys Pro Glu Tyr Asp Arg Arg Phe Val Gly Phe		
530	535	540
Gly Trp Asn Lys Val Ala His Ile Met Glu Leu Asp Val Gln Glu Tyr		
545	550	555
Glu Phe Ile Val Leu Pro Asn Ala Tyr Met Ile His Met Pro His Ala		
565	570	575
Pro Ser Phe Asp Ile Thr Lys Phe Arg Ser Asn Lys Gln Tyr Arg Ile		
580	585	590
Cys Leu Lys Thr Leu Lys Glu Glu Phe Gln Gln Asp Met Ser Arg Arg		
595	600	605
Tyr Gly Phe Ala Ala Leu Lys Tyr Leu Thr Ala		
610	615	

Q1

<210> 49
 <211> 181
 <212> PRT
 <213> Homo sapiens

<400> 49

Leu Val Leu Pro Ser Ala Leu Pro Ala Glu Leu Ala Arg Val Ile Val
1 5 10 15
Leu Asp Thr Asp Val Thr Phe Ala Ser Asp Ile Ser Glu Leu Trp Ala
20 25 30
Leu Phe Ala His Phe Ser Asp Thr Gln Ala Ile Gly Leu Val Glu Asn
35 40 45
Gln Ser Asp Trp Tyr Leu Gly Asn Leu Trp Lys Asn His Arg Pro Trp
50 55 60
Pro Ala Leu Gly Arg Gly Phe Asn Thr Gly Val Ile Leu Leu Arg Leu
65 70 75 80
Asp Arg Leu Arg Gln Ala Gly Trp Glu Gln Met Trp Arg Leu Thr Ala
85 90 95
Arg Arg Glu Leu Leu Ser Leu Pro Ala Thr Ser Leu Ala Asp Gln Asp
100 105 110
Ile Phe Asn Ala Val Ile Lys Glu His Pro Gly Leu Val Gln Arg Leu
115 120 125
Pro Cys Val Trp Asn Val Gln Leu Ser Asp His Thr Leu Ala Glu Arg
130 135 140

Cys Tyr Ser Glu Ala Ser Asp Leu Lys Val Ile His Trp Asn Ser Pro
145 150 155 160

Lys Lys Leu Arg Val Lys Asn Lys His Val Glu Phe Phe Arg Asn Phe
165 170 175

Tyr Leu Thr Phe Leu
180

<210> 50

<211> 230

<212> PRT

<213> Helicobacter pylori

<400> 50

Phe Leu Asn Leu Glu Glu Asn Asp Glu Asn Tyr Phe Tyr Gly Val Leu
1 5 10 15

Glu Val Glu Lys His His Met Met Glu Gly Phe Leu Phe Cys Asn Leu
20 25 30

Asp Tyr Gln Arg Lys Lys Asn Phe Thr Leu Arg Met His Glu Leu Leu
35 40 45

Arg Gly Asn Glu Ala Lys Gly Glu Leu Asp Phe Thr Lys Trp Cys Trp
50 55 60

Pro Asn Met Lys Ala Leu Gly Ile Glu Tyr Cys Val Phe Pro Tyr Tyr
65 70 75 80

Tyr Thr Ile Lys Asp Phe Ser Asn Ala Tyr Leu Asn Glu Asn Tyr Lys
85 90 95

Lys Thr Ile Leu Glu Ala Arg Glu Asn Pro Thr Ile Ile His Tyr Asp
100 105 110

Ala Trp Trp Gly Ala Val Lys Pro Trp Asp Tyr Pro Phe Gly Leu Lys
115 120 125

Ala Asp Leu Trp Leu Asn Ala Leu Ala Lys Thr Pro Phe Met Ser Asp
130 135 140

Trp Ile Asp Ser Ile Ala Arg Val Glu Ile Gly Ser Glu Lys Trp His
145 150 155 160

Arg Tyr His Ser Ile Val Ala Tyr His Tyr Tyr Phe Pro Leu Trp Lys
165 170 175

Thr Glu Glu Gln Ile Ala His Asp Ala Leu Lys Thr Phe Leu Asp His
180 185 190

Tyr Phe Ser Cys Ile His Ala Ala Ile Lys Gln Glu Asn Leu Gly Met
195 200 205

Phe Leu Asn His Tyr Phe Ser His Ala His Ala Glu Ile Lys Glu Asn
210 215 220

Ser Leu Glu Met Phe Leu
225 230

<210> 51
<211> 756
<212> PRT
<213> Homo sapiens

<400> 51
Met Leu Gly Ile Cys Arg Gly Arg Arg Lys Phe Leu Ala Ala Ser Leu
1 5 10 15

Ser Leu Leu Cys Ile Pro Ala Ile Thr Trp Ile Tyr Leu Phe Ser Gly
20 25 30

Ser Phe Glu Asp Gly Lys Pro Val Ser Leu Ser Pro Leu Glu Ser Gln
35 40 45

Ala His Ser Pro Arg Tyr Thr Ala Ser Ser Gln Arg Glu Arg Glu Ser
50 55 60

Leu Glu Val Arg Met Arg Glu Val Glu Glu Glu Asn Arg Ala Leu Arg
65 70 75 80

Q1 Arg Gln Leu Ser Leu Ala Gln Gly Arg Ala Pro Ser His Arg Arg Gly
85 90 95

Asn His Ser Lys Thr Tyr Ser Met Glu Glu Gly Thr Gly Asp Ser Glu
100 105 110

Asn Leu Arg Ala Gly Ile Val Ala Gly Asn Ser Ser Glu Cys Gly Gln
115 120 125

Gln Pro Val Val Glu Lys Cys Glu Thr Ile His Val Ala Ile Val Cys
130 135 140

Ala Gly Tyr Asn Ala Ser Arg Asp Val Val Thr Leu Val Lys Ser Val
145 150 155 160

Leu Phe His Arg Arg Asn Pro Leu His Phe His Leu Ile Ala Asp Ser
165 170 175

Ile Ala Glu Gln Ile Leu Ala Thr Leu Phe Gln Thr Trp Met Val Pro
180 185 190

Ala Val Arg Val Asp Phe Tyr Asn Ala Asp Glu Leu Lys Ser Glu Val
195 200 205

Ser Trp Ile Pro Asn Lys His Tyr Ser Gly Ile Tyr Gly Leu Met Lys
210 215 220

Leu Val Leu Thr Lys Thr Leu Pro Ala Asn Leu Glu Arg Val Ile Val
225 230 235 240

Leu Asp Thr Asp Ile Thr Phe Ala Thr Asp Ile Ala Glu Leu Trp Ala

245								250					255			
Val	Phe	His	Lys 260	Phe	Lys	Gly	Gln	Gln	Val	Leu	Gly	Leu	Val	Glu	Asn	
Gln	Ser	Asp 275	Trp	Tyr	Leu	Gly	Asn 280	Leu	Trp	Lys	Asn	His 285	Arg	Pro	Trp	
Pro	Ala 290	Leu	Gly	His	Gly	Tyr 295	Asn	Thr	Gly	Val	Ile 300	Leu	Leu	Leu	Leu	
Asp 305	Lys	Leu	Arg	Lys	Met 310	Lys	Trp	Glu	Gln	Met 315	Trp	Arg	Leu	Thr	Ala 320	
Glu	Arg	Glu	Leu	Met 325	Gly	Met	Leu	Ser	Thr 330	Ser	Leu	Ala	Asp	Gln	Asp	
Ile	Phe	Asn	Ala 340	Val	Ile	Lys	Gln	Asn 345	Pro	Phe	Leu	Val	Tyr 350	Gln	Leu	
Pro	Cys	Phe 355	Trp	Asn	Val	Gln	Leu 360	Ser	Asp	His	Thr	Arg 365	Ser	Glu	Gln	
Cys	Tyr 370	Arg	Asp	Val	Ser	Asp 375	Leu	Lys	Val	Ile	His 380	Trp	Asn	Ser	Pro	
Lys 385	Lys	Leu	Arg	Val	Lys 390	Asn	Lys	His	Val	Glu 395	Phe	Phe	Arg	Asn	Leu 400	
Tyr	Leu	Thr	Phe	Leu 405	Glu	Tyr	Asp	Gly	Asn 410	Leu	Ile	Arg	Arg	Glu 415	Leu	
Phe	Gly	Cys	Pro 420	Ser	Glu	Ala	Asp	Val 425	Asn	Ser	Glu	Asn	Leu 430	Gln	Lys	
Gln	Leu	Ser 435	Glu	Leu	Asp	Glu	Asp 440	Asp	Leu	Cys	Tyr	Glu 445	Phe	Arg	Arg	
Glu 450	Arg	Phe	Thr	Val	His 455	Arg	Thr	His	Leu	Tyr	Phe 460	Leu	His	Tyr	Glu	
Tyr 465	Glu	Pro	Ala	Ala	Asp 470	Ser	Thr	Asp	Val	Thr	Leu 475	Val	Ala	Gln	Leu 480	
Ser	Met	Asp	Arg	Leu 485	Gln	Met	Leu	Glu	Ala 490	Ile	Cys	Lys	His	Trp 495	Glu	
Gly	Pro	Ile	Ser 500	Leu	Ala	Leu	Tyr	Leu 505	Ser	Asp	Ala	Glu	Ala 510	Gln	Gln	
Phe	Leu	Arg 515	Tyr	Ala	Gln	Gly	Ser 520	Glu	Val	Leu	Met	Ser 525	Arg	His	Asn	
Val 530	Gly	Tyr	His	Ile	Val	Tyr 535	Lys	Glu	Gly	Gln	Phe 540	Tyr	Pro	Val	Asn	
Leu	Leu	Arg	Asn	Val	Ala	Met	Lys	His	Ile	Ser	Thr	Pro	Tyr	Met	Phe	

545 550 555 560
 Leu Ser Asp Ile Asp Phe Leu Pro Met Tyr Gly Leu Tyr Glu Tyr Leu
 565 570 575
 Arg Lys Ser Val Ile Gln Leu Asp Leu Ala Asn Thr Lys Lys Ala Met
 580 585 590
 Ile Val Pro Ala Phe Glu Thr Leu Arg Tyr Arg Leu Ser Phe Pro Lys
 595 600 605
 Ser Lys Ala Glu Leu Leu Ser Met Leu Asp Met Gly Thr Leu Phe Thr
 610 615 620
 Phe Arg Tyr His Val Trp Thr Lys Gly His Ala Pro Thr Asn Phe Ala
 625 630 635 640
 Lys Trp Arg Thr Ala Thr Thr Pro Tyr Arg Val Glu Trp Glu Ala Asp
 645 650 655
 Phe Glu Pro Tyr Val Val Val Arg Arg Asp Cys Pro Glu Tyr Asp Arg
 660 665 670
 Arg Phe Val Gly Phe Gly Trp Asn Lys Val Ala His Ile Met Glu Leu
 675 680 685
 Asp Val Gln Glu Tyr Glu Phe Ile Val Leu Pro Asn Ala Tyr Met Ile
 690 695 700
 His Met Pro His Ala Pro Ser Phe Asp Ile Thr Lys Phe Arg Ser Asn
 705 710 715 720
 Lys Gln Tyr Arg Ile Cys Leu Lys Thr Leu Lys Glu Glu Phe Gln Gln
 725 730 735
 Asp Met Ser Arg Arg Tyr Gly Phe Ala Ala Leu Lys Tyr Leu Thr Ala
 740 745 750
 Glu Asn Asn Ser
 755

<210> 52
 <211> 761
 <212> PRT
 <213> Homo sapiens

<400> 52
 Ala Thr Ser Glu Arg Met Leu Gly Ile Cys Arg Gly Arg Arg Lys Phe
 1 5 10 15
 Leu Ala Ala Ser Leu Ser Leu Leu Cys Ile Pro Ala Ile Thr Trp Ile
 20 25 30
 Tyr Leu Phe Ser Gly Ser Phe Glu Asp Gly Lys Pro Val Ser Leu Ser
 35 40 45

Pro Leu Glu Ser Gln Ala His Ser Pro Arg Tyr Thr Ala Ser Ser Gln
 50 55 60
 Arg Glu Arg Glu Ser Leu Glu Val Arg Met Arg Glu Val Glu Glu Glu
 65 70 75 80
 Asn Arg Ala Leu Arg Arg Gln Leu Ser Leu Ala Gln Gly Arg Ala Pro
 85 90 95
 Ser His Arg Arg Gly Asn His Ser Lys Thr Tyr Ser Met Glu Glu Gly
 100 105 110
 Thr Gly Asp Ser Glu Asn Leu Arg Ala Gly Ile Val Ala Gly Asn Ser
 115 120 125
 Ser Glu Cys Gly Gln Gln Pro Val Val Glu Lys Cys Glu Thr Ile His
 130 135 140
 Val Ala Ile Val Cys Ala Gly Tyr Asn Ala Ser Arg Asp Val Val Thr
 145 150 155 160
 Leu Val Lys Ser Val Leu Phe His Arg Arg Asn Pro Leu His Phe His
 165 170 175
 Leu Ile Ala Asp Ser Ile Ala Glu Gln Ile Leu Ala Thr Leu Phe Gln
 180 185 190
 Thr Trp Met Val Pro Ala Val Arg Val Asp Phe Tyr Asn Ala Asp Glu
 195 200 205
 Leu Lys Ser Glu Val Ser Trp Ile Pro Asn Lys His Tyr Ser Gly Ile
 210 215 220
 Tyr Gly Leu Met Lys Leu Val Leu Thr Lys Thr Leu Pro Ala Asn Leu
 225 230 235 240
 Glu Arg Val Ile Val Leu Asp Thr Asp Ile Thr Phe Ala Thr Asp Ile
 245 250 255
 Ala Glu Leu Trp Ala Val Phe His Lys Phe Lys Gly Gln Gln Val Leu
 260 265 270
 Gly Leu Val Glu Asn Gln Ser Asp Trp Tyr Leu Gly Asn Leu Trp Lys
 275 280 285
 Asn His Arg Pro Trp Pro Ala Leu Gly Arg Gly Tyr Asn Thr Gly Val
 290 295 300
 Ile Leu Leu Leu Leu Asp Lys Leu Arg Lys Met Lys Trp Glu Gln Met
 305 310 315 320
 Trp Arg Leu Thr Ala Glu Arg Glu Leu Met Gly Met Leu Ser Thr Ser
 325 330 335
 Leu Ala Asp Gln Asp Ile Phe Asn Ala Val Ile Lys Gln Asn Pro Phe
 340 345 350

Leu Val Tyr Gln Leu Pro Cys Phe Trp Asn Val Gln Leu Ser Asp His
 355 360 365
 Thr Arg Ser Glu Gln Cys Tyr Arg Asp Val Ser Asp Leu Lys Val Ile
 370 375 380
 His Trp Asn Ser Pro Lys Lys Leu Arg Val Lys Asn Lys His Val Glu
 385 390 395 400
 Phe Phe Arg Asn Leu Tyr Leu Thr Phe Leu Glu Tyr Asp Gly Asn Leu
 405 410 415
 Ile Arg Arg Glu Leu Phe Gly Cys Pro Ser Glu Ala Asp Val Asn Ser
 420 425 430
 Glu Asn Leu Gln Lys Gln Leu Ser Glu Leu Asp Glu Asp Asp Leu Cys
 435 440 445
 Tyr Glu Phe Arg Arg Glu Arg Phe Thr Val His Arg Thr His Leu Tyr
 450 455 460
 Phe Leu His Tyr Glu Tyr Glu Pro Ala Ala Asp Ser Thr Asp Val Thr
 465 470 475 480
 Leu Val Ala Gln Leu Ser Met Asp Arg Leu Gln Met Leu Glu Ala Ile
 485 490 495
 Cys Lys His Trp Glu Gly Pro Ile Ser Leu Ala Leu Tyr Leu Ser Asp
 500 505 510
 Ala Glu Ala Gln Gln Phe Leu Arg Tyr Ala Gln Gly Ser Glu Val Leu
 515 520 525
 Met Ser Arg His Asn Val Gly Tyr His Ile Val Tyr Lys Glu Gly Gln
 530 535 540
 Phe Tyr Pro Val Asn Leu Leu Arg Asn Val Ala Met Lys His Ile Ser
 545 550 555 560
 Thr Pro Tyr Met Phe Leu Ser Asp Ile Asp Phe Leu Pro Met Tyr Gly
 565 570 575
 Leu Val Glu Tyr Leu Arg Lys Ser Val Ile Gln Leu Asp Leu Ala Asn
 580 585 590
 Thr Lys Lys Ala Met Ile Val Pro Ala Phe Glu Thr Leu Arg Tyr Arg
 595 600 605
 Leu Ser Phe Pro Lys Ser Lys Ala Glu Leu Leu Ser Met Leu Asp Met
 610 615 620
 Gly Thr Leu Phe Thr Phe Arg Tyr His Val Trp Thr Lys Gly His Ala
 625 630 635 640
 Pro Thr Asn Phe Ala Lys Trp Arg Thr Ala Thr Thr Pro Tyr Arg Val
 645 650 655

Glu Trp Glu Ala Asp Phe Glu Pro Tyr Val Val Val Arg Arg Asp Cys
 660 665 670
 Pro Glu Tyr Asp Arg Arg Phe Val Gly Phe Gly Trp Asn Lys Val Ala
 675 680 685
 His Ile Met Glu Leu Asp Val Gln Glu Tyr Glu Phe Ile Val Leu Pro
 690 695 700
 Asn Ala Tyr Met Ile His Met Pro His Ala Pro Ser Phe Asp Ile Thr
 705 710 715 720
 Lys Phe Arg Ser Asn Lys Gln Tyr Arg Ile Cys Leu Lys Thr Leu Lys
 725 730 735
 Glu Glu Phe Gln Gln Asp Met Ser Arg Arg Tyr Gly Phe Ala Ala Leu
 740 745 750
 Lys Tyr Leu Thr Ala Glu Asn Asn Ser
 755 760

<210> 53
 <211> 756
 <212> PRT
 <213> Mus musculus

<400> 53
 Met Leu Gly Ile Cys Arg Gly Arg Arg Lys Phe Leu Ala Ala Ser Leu
 1 5 10 15
 Thr Leu Leu Cys Ile Pro Ala Ile Thr Trp Ile Tyr Leu Phe Ala Gly
 20 25 30
 Ser Phe Glu Asp Gly Lys Pro Val Ser Leu Ser Pro Leu Glu Ser Gln
 35 40 45
 Ala His Ser Pro Arg Tyr Thr Ala Ser Ser Gln Arg Glu Arg Glu Ser
 50 55 60
 Leu Glu Val Arg Val Arg Glu Val Glu Glu Glu Asn Arg Ala Leu Arg
 65 70 75 80
 Arg Gln Leu Ser Leu Ala Gln Gly Gln Ser Pro Ala His His Arg Gly
 85 90 95
 Asn His Ser Lys Thr Tyr Ser Met Glu Glu Gly Thr Gly Asp Ser Glu
 100 105 110
 Asn Leu Arg Ala Gly Ile Val Ala Gly Asn Ser Ser Glu Cys Gly Gln
 115 120 125
 Gln Pro Ala Val Glu Lys Cys Glu Thr Ile His Val Ala Ile Val Cys
 130 135 140
 Ala Gly Tyr Asn Ala Ser Arg Asp Val Val Thr Leu Val Lys Ser Val
 145 150 155 160

Leu Phe His Arg Arg Asn Pro Leu His Phe His Leu Ile Ala Asp Ser
 165 170 175
 Ile Ala Glu Gln Ile Leu Ala Thr Leu Phe Gln Thr Trp Met Val Pro
 180 185 190
 Ala Val Arg Val Asp Phe Tyr Asn Ala Asp Glu Leu Lys Ser Glu Val
 195 200 205
 Ser Trp Ile Pro Asn Lys His Tyr Ser Gly Ile Tyr Gly Leu Met Lys
 210 215 220
 Leu Val Leu Thr Lys Thr Leu Pro Ala Asn Leu Glu Arg Val Ile Val
 225 230 235 240
 Leu Asp Thr Asp Ile Thr Phe Ala Thr Asp Ile Ala Glu Leu Trp Ala
 245 250 255
 Val Phe His Lys Phe Lys Gly Gln Gln Val Leu Gly Leu Val Glu Asn
 260 265 270
 Gln Ser Asp Trp Tyr Leu Gly Asn Leu Trp Lys Asn His Arg Pro Trp
 275 280 285
 Pro Ala Leu Gly Arg Gly Tyr Asn Thr Gly Val Ile Leu Leu Leu Leu
 290 295 300
 Asp Lys Leu Arg Lys Met Lys Trp Glu Gln Met Trp Arg Leu Thr Ala
 305 310 315 320
 Glu Arg Glu Leu Met Gly Met Leu Ser Thr Ser Leu Ala Asp Gln Asp
 325 330 335
 Ile Phe Asn Ala Val Ile Lys Gln Asn Pro Phe Leu Val Tyr Gln Leu
 340 345 350
 Pro Cys Phe Trp Asn Val Gln Leu Ser Asp His Thr Arg Ser Glu Gln
 355 360 365
 Cys Tyr Arg Asp Val Ser Asp Leu Lys Val Ile His Trp Asn Ser Pro
 370 375 380
 Lys Lys Leu Arg Val Lys Asn Lys His Val Glu Phe Phe Arg Asn Leu
 385 390 395 400
 Tyr Leu Thr Phe Leu Glu Tyr Asp Gly Asn Leu Ile Arg Arg Glu Leu
 405 410 415
 Phe Gly Cys Pro Ser Glu Thr Asp Val Asn Asn Glu Asn Leu Gln Lys
 420 425 430
 Gln Leu Ser Glu Leu Asp Glu Asp Asp Leu Cys Tyr Glu Phe Arg Arg
 435 440 445
 Glu Arg Phe Thr Val His Arg Thr His Leu Tyr Phe Leu His Tyr Glu
 450 455 460

Phe Glu Pro Ser Ala Asp Asn Thr Asp Val Thr Leu Val Ala Gln Leu
 465 470 475 480
 Ser Met Asp Arg Leu Gln Met Leu Glu Ala Ile Cys Lys His Trp Glu
 485 490 495
 Gly Pro Ile Ser Leu Ala Leu Tyr Leu Ser Asp Ala Glu Ala Gln Gln
 500 505 510
 Phe Leu Arg Tyr Ala Gln Gly Ser Glu Val Leu Met Ser Arg Gln Asn
 515 520 525
 Val Gly Tyr His Ile Val Tyr Lys Glu Gly Gln Phe Tyr Pro Val Asn
 530 535 540
 Leu Leu Arg Asn Val Ala Met Lys His Ile Ser Thr Pro Tyr Met Phe
 545 550 555 560
 Leu Ser Asp Ile Asp Phe Leu Pro Met Tyr Gly Leu Val Glu Tyr Leu
 565 570 575
 Arg Lys Ser Val Ile Gln Leu Asp Leu Ala Asn Thr Lys Lys Ala Met
 580 585 590
 Ile Val Pro Ala Phe Glu Thr Leu Arg Tyr Arg Leu Ser Phe Pro Lys
 595 600 605
 Ser Lys Ala Glu Leu Leu Ser Met Leu Asp Met Gly Thr Leu Phe Thr
 610 615 620
 Phe Arg Tyr His Val Trp Thr Lys Gly His Ala Pro Thr Asn Phe Ala
 625 630 635 640
 Lys Trp Arg Thr Ala Thr Thr Pro Tyr Gln Val Glu Trp Glu Ala Asp
 645 650 655
 Phe Glu Pro Tyr Val Val Val Arg Arg Asp Cys Pro Glu Tyr Asp Arg
 660 665 670
 Arg Phe Val Gly Phe Gly Trp Asn Lys Val Ala His Ile Met Glu Leu
 675 680 685
 Asp Ala Gln Glu Tyr Glu Phe Thr Val Leu Pro Asn Ala Tyr Met Ile
 690 695 700
 His Met Pro His Ala Pro Ser Phe Asp Ile Thr Lys Phe Arg Ser Asn
 705 710 715 720
 Lys Gln Tyr Arg Ile Cys Leu Lys Thr Leu Lys Glu Glu Phe Gln Gln
 725 730 735
 Asp Met Ser Arg Arg Tyr Gly Phe Ala Ala Leu Lys Tyr Leu Thr Ala
 740 745 750
 Glu Asn Asn Ser
 755

<210> 54
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:chemically
synthesized

<400> 54
tggagaacca gagtgactgg ta 22

<210> 55
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:chemically
synthesized

<400> 55
aacctctgga agaaccacag gccct 25

<210> 56
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:chemically
synthesized

<400> 56
agcaggatca cacctgtgtt aa 22

<210> 57
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:chemically
synthesized

<400> 57
ggatccgagg actctgggtg gtgtgggcct gtgtgc 36

<210> 58
<211> 35
<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:chemically synthesized

<400> 58

ctcgaggaca tcttgcaaac cctgtgctgt gatgg

35

<210> 59

<211> 38

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:chemically synthesized

<400> 59

agatctcggg aggctgcgga gagccgccgc cctcgacg

38

<210> 60

<211> 37

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:chemically synthesized

<400> 60

ctcgaggcct cgggcagggc tctggggctg ctgcagg

37

<210> 61

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:chemically synthesized

<400> 61

cacttggtga ctgacgccgt

20

<210> 62

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:chemically synthesized

<400> 62
acggcgctcag tcaccaagtg 20

<210> 63
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:chemically
synthesized

<400> 63
cggcaggctg gctgggagc 19

Q1
<210> 64
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:chemically
synthesized

<400> 64
gctcccagcc agcctgccg 19

<210> 65
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:chemically
synthesized

<400> 65
gctgcggaga gagctctt 18

<210> 66
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:chemically
synthesized

<400> 66
aagagctctc tccgcagc 18

<210> 67
<211> 21
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:chemically synthesized

<400> 67

cgaggcctca ccagtgttg c

21

<210> 68

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:chemically synthesized

<400> 68

gcaagcactg gtgaggcctc g

21

<210> 69

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:chemically synthesized

<400> 69

gcactctcta caccttcag

19

<210> 70

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:chemically synthesized

<400> 70

ctgaaggtgt agagagtg

19

<210> 71

<211> 31

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:chemically synthesized

<400> 71

agatctaacc gctccgactg cggcccgag c

31

<210> 72

<211> 1926

<212> DNA

<213> Homo sapiens

<400> 72

aaccgctccg actgcgggccc gcagccgccc cgcggcccca agtgcgagct cttgcatgtg 60
gccatcgtgt gtgcgggggca taactccagc cgagacgtca tcacctggt gaagtccatg 120
ctcttctaca ggaaaaatcc actgcacctc cacttggtga ctgacgccgt ggccagaaac 180
atcctggaga cgctcttcca cacatggatg gtgcctgctg tccgtgtcag cttttatcat 240
accgaccagc tcaagcccca ggtctcctgg atccccaaca agcactactc cggcctctat 300
gggctaataga agctgggtgct gccagtgcc ttgcctgctg agctggcccc cgctattgtc 360
ctggacacgg atgtcacctt cgctctgac atctcggagc tctgggccct ctgtgctcac 420
ttttctgaca cgcaggcgat cggctctgtg gagaaccaga gtgactggta cctgggcaac 480
ctctggaaga accacaggcc ctggcctgcc ttgggcccgg gatttaacac aggtgtgatc 540
ctgctgcggc tggaccggct ccggcaggct ggctgggagc agatgtggag gctgacagcc 600
aggcgggagc tccttagcct gcctgccacc tcaactggctg accaggacat cttcaacgct 660
gtgatcaagg agcaccggg gctagtgcag cgtctgcctt gtgtctggaa tgtgcagctg 720
tcagatcaca cactggccga gcgctgctac tctgaggcgt ctgacctcaa ggtgatccac 780
tggaactcac caaagaagct tcgggtgaag aacaagcatg tggaattctt ccgcaatttc 840
tacctgacct tcctggagta cgatgggaac ctgctgcgga gagagctctt tgtgtgcccc 900
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actctctaca ccttcaggta ccacgagtgg ccccagggcc acgcacccac agactatgcc 1560
cgctggcggg aggtcaggc cccgtaccgt gtgcaatggg cggccaacta tgaaccctac 1620
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gccttcacca tccatctgcc ccacgctcca agcctggaca tctcccgctt ccgctccagc 1800
cccacctatc gtgactgcct ccaggccctc aaggacgaat tccaccagga cttgtcccgc 1860
caccatgggg ctgctgcctt caaatacctc ccagccctgc agcagcccca gagccctgcc 1920
cgaggc 1926

<210> 73

<211> 642

<212> PRT

<213> Homo sapiens

<400> 73

Asn Arg Ser Asp Cys Gly Pro Gln Pro Pro Pro Pro Pro Lys Cys Glu
1 5 10 15

Leu Leu His Val Ala Ile Val Cys Ala Gly His Asn Ser Ser Arg Asp
 20 25 30
 Val Ile Thr Leu Val Lys Ser Met Leu Phe Tyr Arg Lys Asn Pro Leu
 35 40 45
 His Leu His Leu Val Thr Asp Ala Val Ala Arg Asn Ile Leu Glu Thr
 50 55 60
 Leu Phe His Thr Trp Met Val Pro Ala Val Arg Val Ser Phe Tyr His
 65 70 75 80
 Thr Asp Gln Leu Lys Pro Gln Val Ser Trp Ile Pro Asn Lys His Tyr
 85 90 95
 Ser Gly Leu Tyr Gly Leu Met Lys Leu Val Leu Pro Ser Ala Leu Pro
 100 105 110
 Ala Glu Leu Ala Arg Val Ile Val Leu Asp Thr Asp Val Thr Phe Ala
 115 120 125
 Ser Asp Ile Ser Glu Leu Trp Ala Leu Cys Ala His Phe Ser Asp Thr
 130 135 140
 Gln Ala Ile Gly Leu Val Glu Asn Gln Ser Asp Trp Tyr Leu Gly Asn
 145 150 155 160
 Leu Trp Lys Asn His Arg Pro Trp Pro Ala Leu Gly Arg Gly Phe Asn
 165 170 175
 Thr Gly Val Ile Leu Leu Arg Leu Asp Arg Leu Arg Gln Ala Gly Trp
 180 185 190
 Glu Gln Met Trp Arg Leu Thr Ala Arg Arg Glu Leu Leu Ser Leu Pro
 195 200 205
 Ala Thr Ser Leu Ala Asp Gln Asp Ile Phe Asn Ala Val Ile Lys Glu
 210 215 220
 His Pro Gly Leu Val Gln Arg Leu Pro Cys Val Trp Asn Val Gln Leu
 225 230 235 240
 Ser Asp His Thr Leu Ala Glu Arg Cys Tyr Ser Glu Ala Ser Asp Leu
 245 250 255
 Lys Val Ile His Trp Asn Ser Pro Lys Lys Leu Arg Val Lys Asn Lys
 260 265 270
 His Val Glu Phe Phe Arg Asn Phe Tyr Leu Thr Phe Leu Glu Tyr Asp
 275 280 285
 Gly Asn Leu Leu Arg Arg Glu Leu Phe Val Cys Pro Ser Gln Pro Pro
 290 295 300
 Pro Gly Ala Glu Gln Leu Gln Gln Ala Leu Ala Gln Leu Asp Glu Glu
 305 310 315 320

Asp Pro Cys Phe Glu Phe Arg Gln Gln Gln Leu Thr Val His Arg Val
 325 330 335
 His Val Thr Phe Leu Pro His Glu Pro Pro Pro Pro Arg Pro His Asp
 340 345 350
 Val Thr Leu Val Ala Gln Leu Ser Met Asp Arg Leu Gln Met Leu Glu
 355 360 365
 Ala Leu Cys Arg His Trp Pro Gly Pro Met Ser Leu Ala Leu Tyr Leu
 370 375 380
 Thr Asp Ala Glu Ala Gln Gln Phe Leu His Phe Val Glu Ala Ser Pro
 385 390 395 400
 Val Leu Ala Ala Arg Gln Asp Val Ala Tyr His Val Val Tyr Arg Glu
 405 410 415
 Gly Pro Leu Tyr Pro Val Asn Gln Leu Arg Asn Val Ala Leu Ala Gln
 420 425 430
 Ala Leu Thr Pro Tyr Val Phe Leu Ser Asp Ile Asp Phe Leu Pro Ala
 435 440 445
 Tyr Ser Leu Tyr Asp Tyr Leu Arg Ala Ser Ile Glu Gln Leu Gly Leu
 450 455 460
 Gly Ser Arg Arg Lys Ala Ala Leu Val Val Pro Ala Phe Glu Thr Leu
 465 470 475 480
 Arg Tyr Arg Phe Ser Phe Pro His Ser Lys Val Glu Leu Leu Ala Leu
 485 490 495
 Leu Asp Ala Gly Thr Leu Tyr Thr Phe Arg Tyr His Glu Trp Pro Arg
 500 505 510
 Gly His Ala Pro Thr Asp Tyr Ala Arg Trp Arg Glu Ala Gln Ala Pro
 515 520 525
 Tyr Arg Val Gln Trp Ala Ala Asn Tyr Glu Pro Tyr Val Val Val Pro
 530 535 540
 Arg Asp Cys Pro Arg Tyr Asp Pro Arg Phe Val Gly Phe Gly Trp Asn
 545 550 555 560
 Lys Val Ala His Ile Val Glu Leu Asp Ala Gln Glu Tyr Glu Leu Leu
 565 570 575
 Val Leu Pro Glu Ala Phe Thr Ile His Leu Pro His Ala Pro Ser Leu
 580 585 590
 Asp Ile Ser Arg Phe Arg Ser Ser Pro Thr Tyr Arg Asp Cys Leu Gln
 595 600 605
 Ala Leu Lys Asp Glu Phe His Gln Asp Leu Ser Arg His His Gly Ala
 610 615 620

Ala Ala Leu Lys Tyr Leu Pro Ala Leu Gln Gln Pro Gln Ser Pro Ala
625 630 635 640

Arg Gly

<210> 74
<211> 695
<212> PRT
<213> Homo sapiens

<400> 74
Met Leu Pro Arg Gly Arg Pro Arg Ala Leu Gly Ala Ala Ala Leu Leu
1 5 10 15

Leu Leu Leu Leu Leu Leu Gly Phe Leu Leu Phe Gly Gly Asp Leu Gly
20 25 30

Arg Glu Ala Ala Glu Ser Arg Arg Pro Arg Arg Asn Pro Gly Gly Pro
35 40 45

Ala Pro Gly Thr Thr Thr Ala Pro Thr Ala Ala Arg Ser Arg Arg Arg
50 55 60

Pro Pro Lys Cys Glu Leu Leu His Val Ala Ile Val Cys Ala Gly His
65 70 75 80

Asn Ser Ser Arg Asp Val Ile Ile Leu Val Lys Ser Met Leu Phe Tyr
85 90 95

Arg Lys Asn Pro Leu His Leu His Leu Val Thr Asp Ala Val Ala Arg
100 105 110

Asn Ile Leu Glu Thr Leu Phe His Thr Trp Met Val Pro Ala Val Arg
115 120 125

Val Ser Phe Tyr His Ala Asp Gln Leu Lys Pro Gln Val Ser Trp Ile
130 135 140

Pro Asn Lys His Tyr Ser Gly Leu Tyr Gly Leu Met Lys Leu Val Leu
145 150 155 160

Pro Ser Ala Leu Pro Ala Glu Leu Ala Arg Val Ile Val Leu Asp Thr
165 170 175

Asp Val Thr Phe Ala Ser Asp Ile Ser Glu Leu Trp Ala Leu Phe Ala
180 185 190

His Phe Ser Asp Thr Gln Ala Ile Gly Leu Val Glu Asn Gln Ser Asp
195 200 205

Trp Tyr Leu Gly Asn Leu Trp Lys Asn His Arg Pro Trp Pro Ala Leu
210 215 220

Gly Arg Gly Phe Asn Thr Gly Val Ile Leu Leu Arg Leu Asp Arg Leu

225 230 235 240
 Arg Gln Ala Gly Trp Glu Gln Met Trp Arg Leu Thr Ala Arg Arg Glu
 245 250 255
 Leu Leu Ser Leu Pro Ala Thr Ser Leu Ala Asp Gln Asp Ile Phe Asn
 260 265 270
 Ala Val Ile Lys Glu His Pro Gly Leu Val Gln Arg Leu Pro Cys Val
 275 280 285
 Trp Asn Val Gln Leu Ser Asp His Thr Leu Ala Glu Arg Cys Tyr Ser
 290 295 300
 Glu Ala Ser Asp Leu Lys Val Ile His Trp Asn Ser Pro Lys Lys Leu
 305 310 315 320
 Arg Val Lys Asn Lys His Val Glu Phe Phe Arg Asn Phe Tyr Leu Thr
 325 330 335
 Phe Leu Glu Tyr Asp Gly Asn Leu Leu Arg Arg Glu Leu Phe Val Cys
 340 345 350
 Pro Ser Gln Pro Pro Pro Gly Ala Glu Gln Leu Gln Gln Ala Leu Ala
 355 360 365
 Gln Leu Asp Glu Glu Asp Pro Cys Phe Glu Phe Arg Gln Gln Gln Leu
 370 375 380
 Thr Val His Arg Val His Val Thr Phe Leu Pro His Glu Pro Pro Pro
 385 390 395 400
 Pro Arg Pro His Asp Val Thr Leu Val Ala Gln Leu Ser Met Asp Arg
 405 410 415
 Leu Gln Met Leu Glu Ala Leu Cys Arg His Trp Pro Gly Pro Met Ser
 420 425 430
 Leu Ala Leu Tyr Leu Thr Asp Ala Glu Ala Gln Gln Phe Leu His Phe
 435 440 445
 Val Glu Ala Ser Pro Val Leu Ala Ala Arg Gln Asp Val Ala Tyr His
 450 455 460
 Val Val Tyr Arg Glu Gly Pro Leu Tyr Pro Val Asn Gln Leu Arg Asn
 465 470 475 480
 Val Ala Leu Ala Gln Ala Leu Thr Pro Tyr Val Phe Leu Ser Asp Ile
 485 490 495
 Asp Phe Leu Pro Ala Tyr Ser Leu Tyr Asp Tyr Leu Arg Ala Ser Ile
 500 505 510
 Glu Gln Leu Gly Leu Gly Ser Arg Arg Lys Ala Ala Leu Val Val Pro
 515 520 525
 Ala Phe Glu Thr Leu Arg Tyr Arg Phe Ser Phe Pro His Ser Lys Val

530 535 540
 Glu Leu Leu Ala Leu Leu Asp Ala Gly Thr Leu Tyr Thr Phe Arg Tyr
 545 550 555 560
 His Glu Trp Pro Arg Gly His Ala Pro Thr Asp Tyr Ala Arg Trp Arg
 565 570 575
 Glu Ala Gln Ala Pro Tyr Arg Val Gln Trp Ala Ala Asn Tyr Glu Pro
 580 585 590
 Tyr Val Val Val Pro Arg Asp Cys Pro Arg Tyr Asp Pro Arg Phe Val
 595 600 605
 Gly Phe Gly Trp Asn Lys Val Ala His Ile Val Glu Leu Asp Ala Gln
 610 615 620
 Glu Tyr Glu Leu Leu Val Leu Pro Glu Ala Phe Thr Ile His Leu Pro
 625 630 635 640
 His Ala Pro Ser Leu Asp Ile Ser Arg Phe Arg Ser Ser Pro Thr Tyr
 645 650 655
 Arg Asp Cys Leu Gln Ala Leu Lys Asp Glu Phe His Gln Asp Leu Ser
 660 665 670
 Arg His His Gly Ala Ala Ala Leu Lys Tyr Leu Pro Ala Leu Gln Gln
 675 680 685
 Pro Gln Ser Pro Ala Arg Gly
 690 695

<210> 75
 <211> 617
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> (50)
 <223> where Xaa is any amino acid as defined in the
 specification

<400> 75
 Met Leu Leu Leu Leu Gly Pro Leu Arg Leu Pro Leu Cys Pro Pro Lys
 1 5 10 15
 Arg Lys Asn Pro Leu His Leu His Leu Val Thr Asp Ala Val Ala Arg
 20 25 30
 Asn Ile Leu Glu Thr Leu Phe His Thr Trp Met Val Pro Ala Ile Asp
 35 40 45
 Pro Xaa Val Ser Phe Tyr His Ala Asp Gln Leu Lys Pro Gln Val Ser
 50 55 60

Trp Ile Pro Asn Lys His Tyr Ser Gly Leu Tyr Gly Leu Met Lys Leu
 65 70 75 80
 Val Leu Pro Asn Ala Leu Pro Ala Glu Leu Ala Arg Val Ile Val Leu
 85 90 95
 Asp Thr Asp Val Thr Phe Ala Ser Asp Ile Ser Glu Leu Trp Ala Leu
 100 105 110
 Cys Ala His Phe Ser Asp Thr Gln Ala Ile Gly Leu Val Glu Asn Gln
 115 120 125
 Ser Asp Trp Tyr Leu Gly Asn Leu Trp Lys Asn His Arg Pro Trp Pro
 130 135 140
 Ala Leu Gly Arg Gly Phe Asn Thr Gly Val Ile Leu Leu Arg Leu Asp
 145 150 155 160
 Arg Leu Arg Gln Ala Gly Trp Glu Gln Met Trp Arg Leu Thr Ala Arg
 165 170 175
 Arg Glu Leu Leu Ser Leu Pro Ala Thr Ser Leu Ala Asp Gln Asp Ile
 180 185 190
 Phe Asn Ala Val Ile Lys Glu His Pro Gly Leu Val Gln Arg Leu Pro
 195 200 205
 Cys Val Trp Asn Val Gln Leu Ser Asp His Thr Leu Ala Glu Arg Cys
 210 215 220
 Tyr Ser Glu Ala Ser Asp Leu Lys Val Ile His Trp Asn Ser Pro Lys
 225 230 235 240
 Lys Leu Arg Val Lys Asn Lys His Val Glu Phe Phe Arg Asn Phe Tyr
 245 250 255
 Leu Thr Phe Leu Glu Tyr Asp Gly Asn Leu Leu Arg Arg Glu Leu Phe
 260 265 270
 Val Cys Pro Ser Gln Pro Pro Pro Gly Ala Glu Gln Leu Gln Gln Ala
 275 280 285
 Leu Ala Gln Leu Asp Glu Glu Asp Pro Cys Phe Glu Phe Arg Gln Gln
 290 295 300
 Gln Leu Thr Val His Arg Val His Val Thr Phe Leu Pro His Glu Pro
 305 310 315 320
 Pro Pro Pro Arg Pro His Asp Val Thr Leu Val Ala Gln Leu Ser Met
 325 330 335
 Asp Arg Leu Gln Met Leu Glu Ala Leu Cys Arg His Trp Pro Gly Pro
 340 345 350
 Met Ser Leu Ala Leu Tyr Leu Thr Asp Ala Glu Ala Gln Gln Phe Leu
 355 360 365

His Phe Val Glu Ala Ser Pro Val Leu Ala Ala Arg Gln Asp Val Ala
370 375 380

Tyr His Val Val Tyr Arg Glu Gly Pro Leu Tyr Pro Val Asn Gln Leu
385 390 395 400

Arg Asn Val Ala Leu Ala Gln Ala Leu Thr Pro Tyr Val Phe Leu Ser
405 410 415

Asp Ile Asp Phe Leu Pro Ala Tyr Ser Leu Tyr Asp Tyr Leu Arg Ala
420 425 430

Ser Ile Glu Gln Leu Gly Leu Gly Ser Arg Arg Lys Ala Ala Leu Val
435 440 445

Val Pro Ala Phe Glu Thr Leu Arg Tyr Arg Phe Ser Phe Pro His Ser
450 455 460

Lys Val Glu Leu Leu Ala Leu Leu Asp Ala Gly Thr Leu Tyr Thr Phe
465 470 475 480

Arg Tyr His Glu Trp Pro Arg Gly His Ala Pro Thr Asp Tyr Ala Arg
485 490 495

Trp Arg Glu Ala Gln Ala Pro Tyr Arg Val Gln Trp Ala Ala Asn Tyr
500 505 510

Glu Pro Tyr Val Val Val Pro Arg Asp Cys Pro Arg Tyr Asp Pro Arg
515 520 525

Phe Val Gly Phe Gly Trp Asn Lys Val Ala His Ile Val Glu Leu Asp
530 535 540

Ala Gln Glu Tyr Glu Leu Leu Val Leu Pro Glu Ala Phe Thr Ile His
545 550 555 560

Leu Pro His Ala Pro Ser Leu Asp Ile Ser Arg Phe Arg Ser Ser Pro
565 570 575

Thr Tyr Arg Asp Cys Leu Gln Ala Leu Lys Asp Glu Phe His Gln Asp
580 585 590

Leu Ser Arg His His Gly Ala Ala Ala Leu Lys Tyr Leu Pro Ala Leu
595 600 605

Gln Gln Pro Gln Ser Pro Ala Arg Gly
610 615

A₁
sub C₂₃
cont.